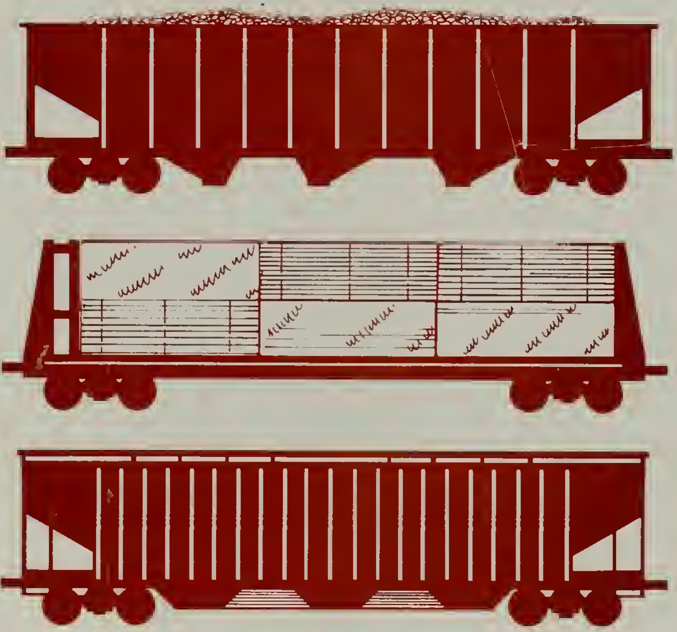
DRAFT

STATE OF MONTANA

RAIL PLAN



PREPARED BY: RAIL PLANNING UNIT
MONTANA DEPARTMENT OF HIGHWAYS
AUGUST 1979

3-23-88

MONTANA RAIL PLAN

DRAFT

July, 1979

Pursuant to Section 803 of the Railroad
Revitalization and Regulatory Reform Act of 1976

Prepared by:
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In Cooperation with
The Federal Railroad Administration
United States Department of Transportation

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PREFACE

The Montana Rail Plan was prepared by Roger CREIGHTON ASSOCIATES Incorporated in close cooperation and coordination with the Rail Planning Unit of the Montana Department of Highways. In this study, Robert Peccia and Associates conducted the rail users' survey and most of the community impact analysis. Railway Technical Services, Inc. inspected selected branchlines and prepared associated maintenance, salvage value, and rehabilitation cost estimates.

As so often happens with a study of this type, RCAI was heavily dependent upon local, state-level, and railroad company assistance in gathering data for this project. RCAI wishes to acknowledge this valuable assistance and to express its appreciation of the interest and support offered by many individuals in government and the rail industry.

EXECUTIVE SUMMARY

The Montana Rail Plan has been prepared pursuant to Section 803 of the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act). This Act requires states to prepare a plan for rail services to become eligible for Federal rail service assistance. The Legislature assigns primary responsibility for systems or mainline planning to the Federal government and the railroads, individually and collectively. Consequently, most of the technical study done in preparing this plan document has focused on the merits of the ten light density lines presently or potentially the subject of an abandonment proceeding before the Interstate Commerce Commission (ICC). These lines are listed on the following page.

LIGHT DENSITY LINES FOR WHICH DETAILED ASSESSMENTS HAVE BEEN COMPLETED

	Line[1]	Between (Termini)	ICC Category[2]	Length (mi.)
1.	MILW MD - 14th Sub.	Agawam-Great Falls	1, 3	69.6
2.	MILW MD - 13th Sub.	Great Falls-Lewistown	1	134.5
3.	MILW MD - 10th Sub.	Lewistown-Harlowton	1	61.0
4.	MILW MD - 12th Sub.	Lewistown-Winifred	3	42.7
5.	MILW MD - 11th Sub.	Lewistown-Heath	1	9.2
6.	BN MD - 5th Sub.	Moccasin-Lewistown	1	30.7
7.	BN MD - 7th Sub.	Hogeland-Saco	1	79.3
8.	BN RMD - 9th Sub.	Red Lodge-Silesia	3	34.5
9.	MILW MD - 2nd Sub.	Ringling-Dorsey[3]	3	22.8
10.	BN MD - 1st Sub. Ind. Track	Glasgow-Glasgow AFB	1	18.8
11.	BN RMD - 13th Sub.[4]	Haugan-Mullan, ID Mullan, ID-Wallace, ID[5]	3 3	29.5 9.5

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[1] MD - Montana Division (BN and MILW), RMD - Rocky Mountain Division (BN only)

[2] 1 - subject to abandonment within three years; 2 - under study for possible future abandonment; 3 - abandonment application pending

[3] 3.5 miles owned by the Milwaukee, the remainder by the White Sulphur Springs and Yellowstone Park Railroad. (WSPYPR leases portion owned by MILW, for which an abandonment application has been filed)

[4] Detailed assessment originally prepared by RCAI for the Idaho Transportation Department

[5] Discontinue BN service only. Lines to be transferred to the UP

The Montana Rail Plan was prepared following a carefully defined work program comprised of the following components:

- Designing and conducting a survey of rail-dependent firms located on the above lines to determine the characteristics of the firms and detailed information on rail shipments and receipts during 1978.
- Assessing the impacts that would occur upon rail-dependent firms and the surrounding communities were rail service discontinued. Impacts include economic, environmental, energy, social, and highway system effects. From this, the cost of discontinuing rail service was determined for each line.
- Conducting a financial analysis of the profitability of each line to the owning railroad. This involved comparing attributable revenues and avoidable costs to determine the net cost of continuing rail service for each line. In addition, rehabilitation needs and costs were also assessed.
- Investigating substitute service possibilities involving changes in rail service or the use of alternative modes.
- Preparing detailed assessments for each line studied.
- Preparing the state rail plan document in conformance with federal requirements.

As a consequence of this work, the Department has concluded that Montana should seek federal assistance to rehabilitate the (1) Agawam to Great Falls, (2) Great Falls to Lewistown, and (3) Lewistown to Harlowton lines. All three are Milwaukee lines. This result stems from the inherent profitability of the lines, rather than from the desire to retain the Milwaukee as a competitor to the Burlington Northern. While no economic basis exists for abandonment, the Milwaukee has already served notice of its intention to abandon those lines as part of its reorganization efforts. Thus abandonment is a very real possibility, institutionally.

Federal assistance is not being sought for the remaining seven lines for one or more of the following reasons:

- The cost of discontinuing rail service is low, indicating that the community impacts resulting from potential abandonment are small.
- The cost of discontinued service divided by the cost of continued service ratios are low. These ratios, analogous to a benefit-cost ratio, should be at least 1.5 (or higher) to justify public investment in keeping marginal or unprofitable rail services going.
- The line is uneconomic to the owning railroad (i.e., attributable revenues are less than the avoidable costs), thus necessitating continuing shipper or governmental subsidization of operations.
- While there is the possibility that abandonment of any one of these lines might be counter to Montana's long-term interest in view of changing energy availability and price, there is at present little demonstrated need for retaining rail service under these circumstances.
- While the line may have sufficient traffic potential from on-going or expected economic development to become profitable within a short period, the lack of funds and any immediate pressing needs obviates the possibility of including these lines in Montana's Section 803 program, at least for now.

MDH does not encourage the owning railroads to abandon these lines. However, it fully recognizes the economic reasons underlying the possible abandonment of these lines and will not oppose such action so long as it can be proven that the line is indeed unprofitable and provided that no significant local impact would occur with abandonment.

How does the above relate to the larger question concerning the future of the Milwaukee in Montana? Shouldn't this be the main focus of rail planning efforts, rather than concentrating on ten relatively unimportant light density lines? What efforts are being undertaken to save all or portions of the Milwaukee system in Montana? The

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bankruptcy of the Milwaukee and especially the recent efforts of the Trustee to embargo rail service in the west has led to increased interest in seeking a solution for the Milwaukee other than a retrenchment to a midwest core system. The U. S. District Court overseeing the Milwaukee reorganization has directed the Trustee to submit a plan by August 6. While the specific details of this plan, it obviously will depend heavily on the financial studies conducted for the Trustee by Booz, Allen & Hamilton.

As an alternative to this plan, considerable interest has been expressed in employee and shipper ownership of a railroad which would be a true replacement and successor to present railroad management. A "New Milwaukee Organization" has been proposed to develop a specific organizational, financial, management and marketing plan for a "Milwaukee lines west" railroad. Montana supports the New Milwaukee Organization in its efforts to create an employee and shipper owned railroad replacing the bankrupt Milwaukee.

Simultaneously with the above, South Dakota has proposed a short and longer term program of rehabilitating the Milwaukee mainline between Jonathan, Minnesota and Miles City as a means of preserving essential coal movements to electric generating stations in that state and Minnesota. Both Section 803 and 505 funds would be used for this purpose. While prepared to "go-it-alone" on this project, South Dakota has sought to broaden the sponsorship of what is essentially a regional project by including the other states benefiting from retention of this portion of the mainline (i.e., Minnesota, North Dakota, and Montana). At this

point, Montana has not elected to join in this project.

What happens if the above efforts fail and the Burlington Northern then becomes the dominant carrier in Montana? Is this necessarily bad? No, but it does have the effect of reducing the leverage that the state government and shippers have in rate and service matters. Is there any other possibility should the alternatives presented fall by the wayside?

One promising "substitute service" type concept, applicable particularly to the grain lines in central Montana, would be to construct a grain subterminal in the general Lewistown area allowing the use of unit grain trains. Grain shipments presently made by rail from grain public warehouses located along the Milwaukee (and other lines) would instead be trucked to the centralized facility where it would be loaded into 100-ton hoppers. Shipments would be made in 50-car units, thus introducing economies of scale which would be reflected in better utilization of the car fleet and more reliable service. Its practicality of the grain subterminal rests on (1) being able to pass along significant economic benefits (transport cost savings) to the farmers, grain elevator operators, and railroads, (2) a willingness on the part of grain warehouses to combine together their shipping requirements into unit train quantities bound for a single destination, while retaining their independence and competitiveness in all other areas, and (3) the availability of capital funds to construct a strategically located grain subterminal and make necessary improvements to the highway system to sustain the "collector" trucking required in support of the terminal.

This concept is the only long-term, technologically advanced solution possible today.

There is no question that the preparation of this state rail plan would have been far easier had the Milwaukee's future been settled, one way or another. While the merits of the individual Milwaukee lines can be readily assessed on the basis of whether the Milwaukee stays or goes, the selection of projects cannot. Allocation of Montana's Section 803 allotment vis-a-vis Milwaukee lines is a function of (1) who is the ultimate owner and/or operator, including financial capability, (2) how much of the present system is to be retained, (3) anticipated short-term needs for rehabilitation funding -- especially for "emergency" type projects or "spot" improvements to prevent or minimize service interruptions pending determination of appropriate long-term solutions, and (4) the results obtained from the proposed grain subterminal feasibility study. Given the present situation, one list of projects and their assigned priorities is impossible. Consequently, separate project lists have been developed for the different reorganization plans or extensions thereof. These project lists have the following general thrust:

- Emergency or spot repair projects on the Milwaukee's 10th, 11th, 13th, and 14th subdivisions using FY 1979 Section 803 funds.
- Long-term rehabilitation of the above Milwaukee lines using FY 1980 (and beyond) Section 803 funds primarily if the lines are retained by the Milwaukee or successor organization (e.g., the New Milwaukee Organization).
- Otherwise, investment in a grain subterminal in the Lewistown area using FY 1980 (and beyond) Section 803 funds, if the various alternatives to the Trustee's Reorganization Plan are unsuccessful and further study shows the subterminal concept to be feasible.

INTRODUCTION

The Montana Rail Plan has been prepared pursuant to Section 803 of the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act). This Act extended both the local rail service continuation program and the rail transportation planning process originally begun elsewhere to all states in the nation.[1] It directed in Section 803(j) that, as a prerequisite for eligibility to receive rail service assistance, a state would have to establish "an adequate plan for rail services in such State as part of an overall planning process for all transportation services in such State, including a suitable process for updating, revising and amending such plan; and that such State plan is administered or coordinated by a designated State agency and provides for the equitable distribution of resources."

In general, the role of states and local governments in rail planning, as indicated in the 4R Act, is primarily in the field of local rail service. The legislation assigns the primary responsibility for rail systems planning to the Federal government and the railroads, individually and collectively. However, since actions taken at the federal level and by railroad corporations directly affect state economies, state government must be aware of these changes and knowledgeable of the rail system within such state.

The value of the rail transportation planning process to date lies primarily in the understanding gained concerning the physical, operational, and commodity flow characteristics of the rail system within Montana and its impact upon the state's economy. This plan

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[1] State rail planning for local rail service was first instituted by the Regional Rail Reorganization Act of 1973 (3R Act) for the 17 states in the northeast and midwest. This latter act provided for the reorganization of six major bankrupt railroads into the Consolidated Rail Corporation (Conrail)

represents the culmination of an initial examination of the state's rail system in general, plus documenting the results of a more detailed examination of the ten light density branchlines which may be abandoned during the next several years. Rail planning is not a one-shot operation done solely to meet a Federal requirement, but rather is an on-going activity and responsibility of the Montana Department of Highways (the agency designated by the Governor to develop the state rail plan). As conditions change, so will the plans and recommendations contained in the state rail plan document likewise change. Future updates of the state rail plan will identify and address significant rail-related issues where the state might be able to play a constructive role.

The Montana Rail Plan was prepared following a carefully defined work program to insure that (1) the technical requirements of Federal regulations pertaining to state rail planning would be met, (2) the most efficient use of Montana Department of Highways and consultant personnel would be obtained, (3) rail planning would move forward toward completion in a timely fashion, and (4) the resulting plan would address the immediate rail-related issues facing the state.1/ Prior to preparing the state rail plan, the Department prepared and submitted to the Federal Railroad Administration, a revised planning work statement, dated December 12, 1978 and an application for planning funds.

The Montana Rail Plan is comprised of seven chapters. Chapter One briefly describes the planning process utilized in the development of the state rail plan. A more detailed description of the procedures

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1/ Applicable federal regulations implementing Section 803 of the 4R Act are published in 49 CFR Part 266 - Assistance to States for Rail Services Assistance Under Section 5 of the Department of Transportation Act - Procedures and Requirements Regarding Applications and Disbursements, Federal Register, Vol. 43, No. 2., January 4, 1978.

used is contained in Technical Appendices B and C. Chapter Two illustrates, through figures and text, the general functioning of the rail system in the state. Chapter Three identifies the different classes of rail service, again using figures and descriptive material. Chapter Four introduces and explains the individual light density line assessments that have been completed by the Montana Department of Highways and which appear in Technical Appendix A. Chapter Five describes the procedure used to prioritize light density lines and the resulting rank-ordering of potential projects. Chapter Six describes railroad, governmental, and public participation in the rail planning process. Finally, Chapter Seven presents a brief description of the overall planning process for all transportation services in the state. These seven chapters, plus technical appendices, meet the state rail plan content requirements as outlined in 49 CFR Part 266.15.

I. THE PLANNING PROCESS

Federal regulations require that state rail plans shall:[1]

> "Describe the planning process utilized in the development of the State Rail Plan, specifying the particulars as to State rail policy and objectives, data sources, assumptions, analytical methodology, and other special problems or conditions which would be essential to the understanding of the setting in which the State Rail Plan was developed. In particular, the State shall note any modification of the planning process set forth in its planning work statement."

A. State Rail Policy and Objectives

Rail transportation planning stems from the policy statement:

> "It is hereby declared to be the railroad transportation policy of the State of Montana that the continued health and welfare of its citizens demand a viable railroad transportation system, adequate to meet our economic needs and necessities; to encourage, promote, and support safe, adequate, economical, and efficient rail service in the private sector; to foster the establishment and maintenance of just and reasonable charges for transportation services rendered; to cooperate with the railroads, other States, and the Federal Government; all to the end of developing and preserving a privately owned railroad system, as part of Montana's total transportation system, adequate to meet the needs of our citizens, their commerce, and their defense."

Montana faces a complex variety of rail transportation issues. Short-term issues generally reflect concern over the railroad system physical plant (e.g., condition of track, lack of rolling stock, potential abandonments, unreliable service and transit times). Long-term issues include concern over modal competitiveness, rate cycles, economic and environmental conflicts, regulatory impacts (versus those that would occur with deregulation), transportation market development for the movement of goods and people, and the rail system's ability to meet future transportation demands. Short-term issues are addressed in

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[1] 49 CFR Part 266.15(c)(1)

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the initial State Rail Plan being developed in Phase II; longer-term issues will be addressed in subsequent phases.

The Montana Department of Highways has developed a number of policies and objectives to guide rail planning in the state. Policies are broad statements reflecting Montana's posture in rail planning. Objectives describe the actions necessary to implement stated policies.

Policies include the following:

1. Continue present reliance upon privately-owned railroads in providing essential intra and interstate rail services.
2. Recognize and accept the principle that individual lines must earn sufficient revenues to cover operating expenses and provide the owning railroad with a reasonable return on the investment.
3. Coordinate rail planning and implementation activities with state and local land use policies and social, economic, environmental, and energy use objectives.
4. Encourage railroad efforts to improve service to Montana shippers.
5. Preserve rail access to natural and economic resources having expansion or development potential.
6. Utilize abandoned rail rights-of-way for public uses wherever feasible and practical.

Objectives include the following:

1. Develop the state rail plan as a component of an overall intermodal transportation plan. Evaluate the rail system as a portion of the state's total transportation system.
2. Institute a cooperative, comprehensive and continuing rail planning program which includes participation from state and local governments, the rail industry, and provides for public input.
3. Encourage modal (or intermodal) usage which provides the lowest total transport cost.
4. Identify and evaluate user needs and revenue generation required for the economic operation of specific light density lines.

5. Quantify the economic impacts of proposed rail system adjustments (abandonments).

6. Assess and mitigate, if possible, any environmental and social impacts of rail system adjustments.

7. Take steps necessary to maintain in or return to the private sector these rail lines found to be economically viable.

8. Evaluate alternatives to rail system adjustments, and arrange transportation solutions for shippers on lines not found to be viable.

9. Coordinate funding from governmental and private sources for rail service continuation, rehabilitation, acquisition, substitute service, or new construction projects selected as a consequence of state rail planning.

10. Encourage the continued use of rail passenger service, where provided. Promote expanded passenger service only where the potential traffic is large enough to substantially sustain the service provided.

11. Review state statutes and local regulations to eliminate undue impediments to efficient railroad operations.

12. Promote or sponsor changes and additions (as necessary) to existing federal and state legislation to develop a sound, efficient program of state rail planning and local service assistance.

In summary, Montana's rail planning program is based on a commitment to its citizens to provide and maintain an adequate, safe, efficient and economical transportation system for the movement of persons and goods within the state.

B. Analytical Methodology

To develop the state rail plan, the work involved was divided into nine major tasks which are identified below:

2.1 Rail User Survey
2.2 Community Impact Analysis
2.3 Financial Analysis
2.4 Analysis of Alternatives
2.5 Individual Light Density Line Assessments

2.6 Prioritizating of Light Density Lines
2.7 Rail System Analysis and Classification of Lines
2.8 Preparation of Initial State Rail Plan
2.9 Public Participation

Each of the tasks which make up the rail planning process is fully described in the Proposal for the Montana Rail Study.[1]

A more detailed description of the analytical methodology used in analyzing light density lines appears in Technical Appendix B, which is bound separately from this volume. The basic principles utilized in light density line planning are summarized in the following paragraphs:

> Railroads naturally seek to abandon lines which they consider to be unprofitable. What this means is that prior to abandonment, shippers and communities located along the line in question are being subsidized in part by shippers located elsewhere on the rail system. For them, this is an ideal situation, since no social cost is incurred so long as the line remains in operation and no explicit government or shipper subsidies are required to sustain rail service. Depending upon the financial health of the owning railroad and the line's long-term traffic potential, this situation sometimes can go on for years. However, sooner or later the day of reckoning will come when the railroad will seek financial relief through abandonment, thus ending cross-subsidization. If the social costs of abandoning the line are large, the state, local communities, or affected shippers may seek to keep the line in operation through subsidizing operations or capital investment in rehabilitating the track structure. This then requires an explicit expenditure heretofore not required. Should the decision be to allow abandonment to take place, various social costs will occur as affected communities adjust to the loss of rail service. To the affected communities, these costs were held in abeyance so long as the line remained in operation.
>
> Thus, ICC issuance of a certificate of public convenience and necessity triggers two costs which affected communities were not previously forced to consider: (1) subsidization or capital investment for continuing rail service, and (2) social costs triggered by discontinuing rail service. The latter will

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[1] See "Proposal for the Montana Rail Study" prepared for the Montana Department of Highways by Roger Creighton Associates, Inc., April 1979

occur only if rail service ceases.[1] So long as rail service is continued (subsidized or not), these costs do not actually occur. However, once rail service is terminated, these costs are incurred as personal income is lost, transport costs increase, tax receipts decrease, and transfer payments are made. The cost of discontinuing rail service reaches its peak shortly after service termination (usually at the point of maximum unemployment) and declines thereafter. If residual unemployment and increased transport costs occur, these costs may never disappear altogether. The general shape of the social cost curve is shown in Figure 2a.

The cost of continuing rail service, which occurs only if a deliberate decision is made to retain rail service, is comprised of some combination of capital and annual costs. Capital costs include expenditures for track rehabilitation or line acquisition. While such expenditures can be made on a cyclical basis, they are typically "one-time" events reflecting the infusion of government or shipper funds for the purpose of eliminating deferred maintenance and reducing annual costs. Annual costs include expenditures for maintenance of way and structures, maintenance of equipment, traffic and transportation, taxes, leasing the line (if the owning railroad is different from the operating railroad), management fees, insurance, profit, and off-branch operating costs (for other than short-line railroads). Annual gross costs are reduced by the revenues received, thus producing a net annual cost (avoidable costs less attributable revenues). The time patterns of capital and operating expenditures are indicated in Figures 1b, c, and d. Capital expenditures occur occasionally and in easily-defined, often large amounts. Operating expenditures occur continuously as a function of output per unit time. Net annual costs may rise or decline depending on the interactions of annual operating costs and revenues.

Government (or government-shipper-railroads) light density line decisions should flow from an objective comparison of the cost of continuing service versus the cost of discontinuing service. From an economic point of view, the preferred solution is the one having the least total cost. This principle holds for both initial assessments and reassessments. However, subsidies or capital investments occurring prior to reassessment represent sunk monies and cannot be included in the cost comparisons except for salvage values resulting from capital improvements.[2]

1/ Many light density line studies have used the term "benefits" to describe the economic impacts avoided by continuing rail service. Benefits are more properly defined as savings over an existing condition. Since no social costs are occurring prior to abandonment, no new benefits can be generated (from a governmental viewpoint) by either continuing or discontinuing rail service. Any decision will, therefore, cause costs to be incurred. The decision then becomes one of choosing the alternative which produces the least cost. Hence, the term "benefits" has not been used.

2/ Salvage values from track rehabilitation are quite small (10 to 15 percent of the initial investment). This stems from the labor intensive character of the work (largely tie renewals).

C. Data Sources

Both the Proposal for the Montana Rail Study and Technical Appendix B describe the data sources used in preparing the State Rail Plan. The shippers' survey provided much of the new data used in the plan. Other new data such as (1) traffic and revenue data by station, (2) current operating practices, and (3) shippers using a particular light density line were supplied to the Department by the railroads. The Department (through Railway Technology Services, Inc.) inspected and prepared rehabilitation cost estimates for five of the ten light density lines considered initially. Various other types of data were obtained from State and local agencies as the need arose.

D. Other Special Problems or Conditions

No special problems or conditions were encountered in preparing the State Rail Plan other than some variability in the quality of data obtained from different sources.

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Figure 1a

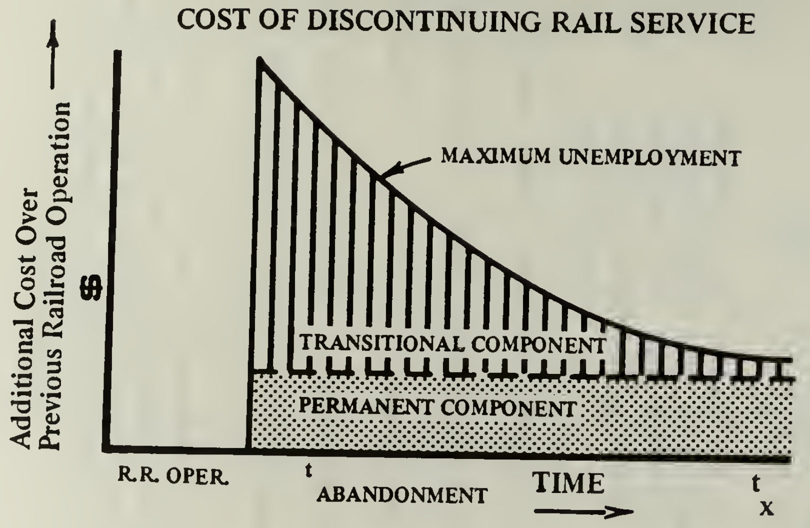


Figure 1b

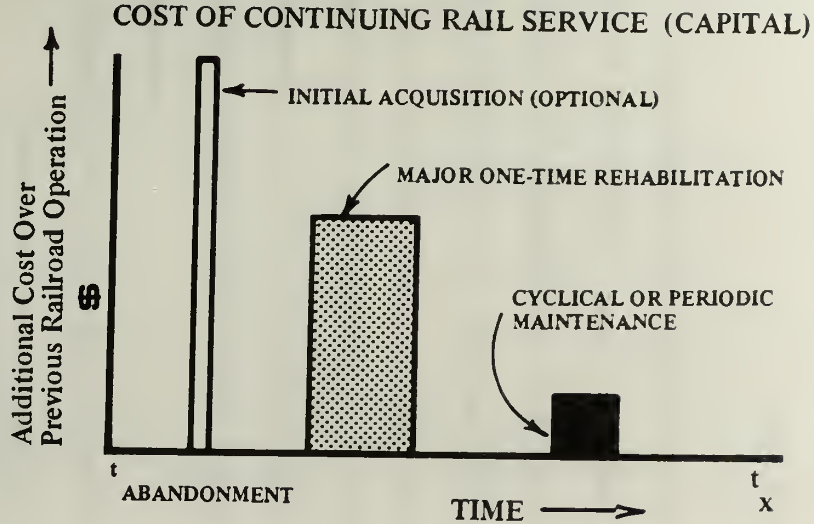


Figure 1c

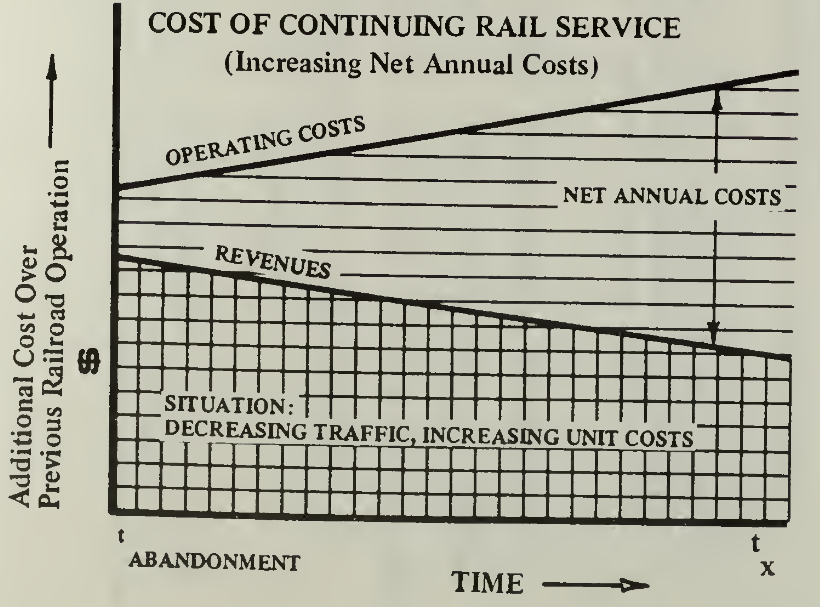
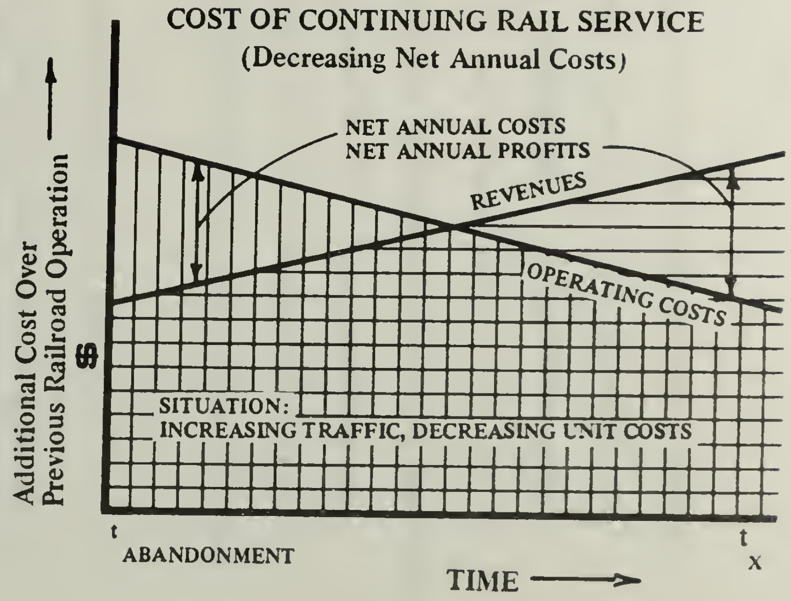


Figure 1d



II. THE STATE RAIL SYSTEM

This chapter provides a brief overview of the state rail system, of which the light density lines analyzed in detail in Chapters IV and V and in Appendix A are only a small component. Light density lines, which have or may be the subject of an abandonment, amount to less than ten percent of the total state rail mileage and a far smaller proportion of originating or terminating carloads.[1] The purpose of the chapter is to "set the scene" for those not intimately familiar with the location and functioning of the various main and branchlines in Montana.

Federal regulations require that state rail plans must:[2]

> "Contain an illustration of the entire State rail system on suitable scale maps of the State highway system (such as a reduction of the County Highway Planning Series of maps), designating with respect to each line listed under paragraphs (c)(3)(iii), (iv), and (v) of this section, including all lines connecting to them:
>
> (i) The operating carrier or carriers,
> (ii) Freight traffic density, and
> (iii) Location of passenger service on such lines.
>
> These maps shall be accompanied by a written description of the service provided on each line, including an identification, at the two-digit level of the Standard Transportation Commodity Code, of the commodity types carried on each line."

These requirements are minimal. Rather than simply focusing on light density lines which have been, are in the process of, or may be abandoned, the physical and operating characteristics of the state rail system and its usage in moving commodities to, from, and internally within Montana are briefly presented in this chapter.

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[1] In addition, the Milwaukee is proposing the abandonment of its 745 mile mainline across Montana (15 percent of the rail mileage). Total rail mileage subject to abandonment amounts to over 1200 miles or 25 percent of total route mileage.

[2] 49 CFR Part 266.15(c)(2).

A. Physical Characteristics

As shown in Figure 2, Montana's rail system consists of approximately 4800 route miles of track operated primarily by four Class I and two Class II carriers.[1]

The dominant carrier is the Burlington Northern, which in 1979 operated 3520 route miles covering all portions of the state. Nationwide, the BN operates 24,639 route miles in 19 states and two Canadian provinces. It extends from the Great Lakes and Mississippi Valley through the grain belt to various points in the Pacific Northwest. Its two east-west mainlines pass through northern and southern Montana.[2] In 1976, the BN originated or terminated 149 million tons and earned revenues of over 1.5 billion dollars on a systemwide basis. Locally in Montana, the railroad originated or terminated over 30 million tons amounting to approximately $350 million in revenues in 1977. The BN accounted for about 92.5 percent of the state's rail tonnage and 88.5 percent of the total freight revenues in 1977. Figure 3 shows Burlington Northern lines in Montana.

The Chicago, Milwaukee, St. Paul and Pacific Railroad, commonly known as the Milwaukee Road, also extends from Chicago and Louisville gateways in the midwest through the northern grain belt states and

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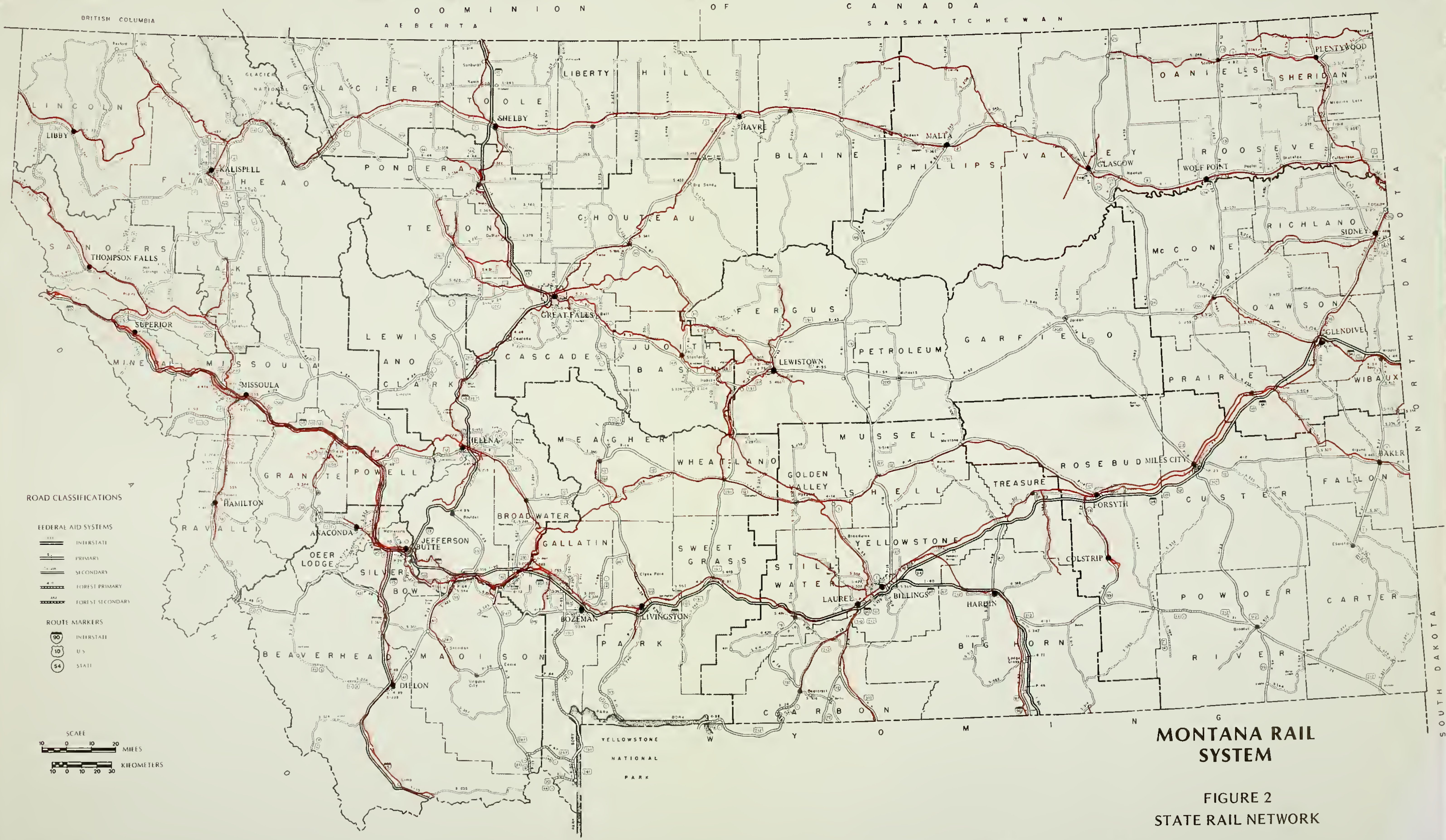
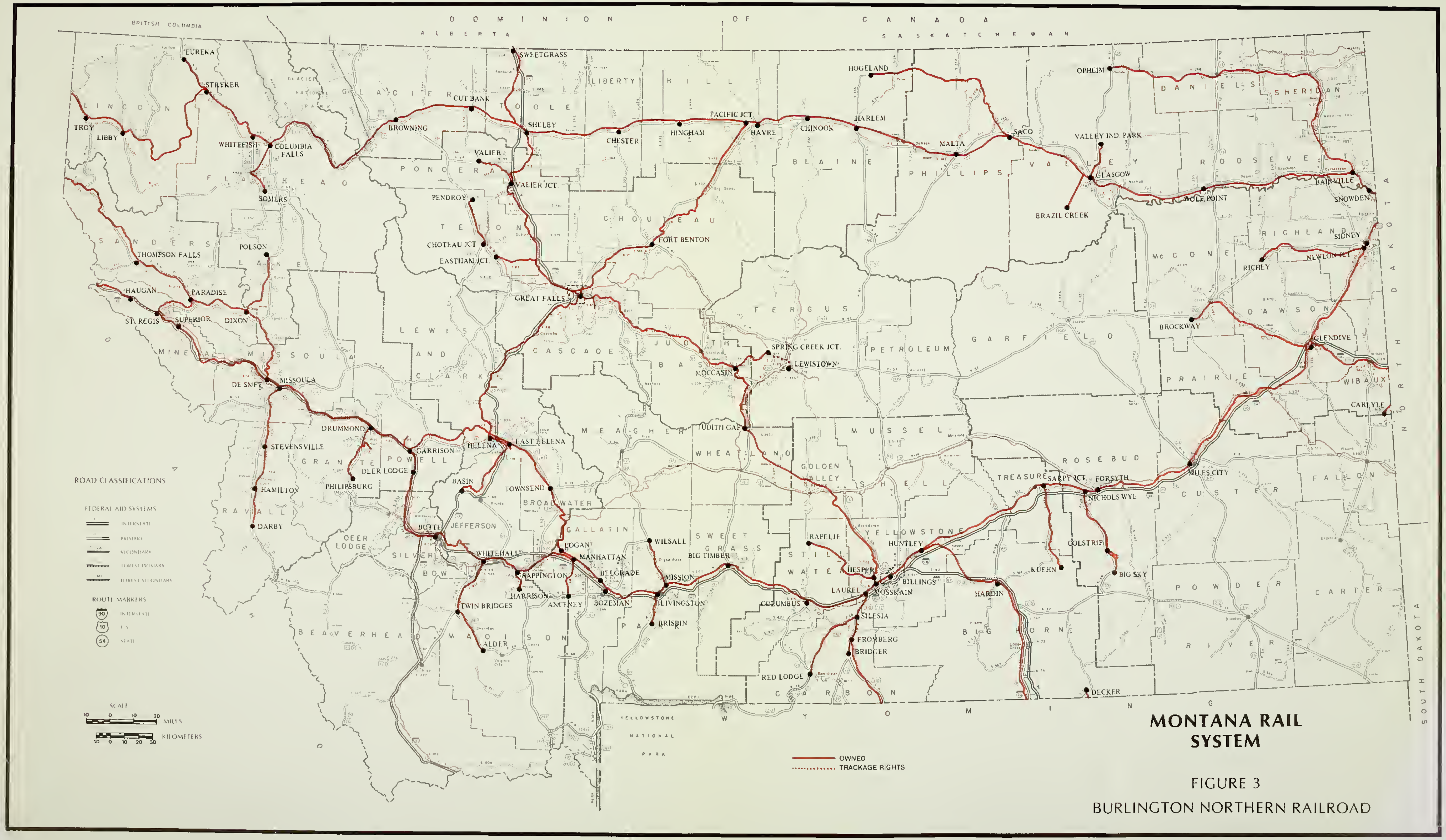
[1] Class I carriers are the Burlington Northern RR; the Chicago, Milwaukee, St. Paul and Pacific RR; the Union Pacific RR, and the Soo RR. Class II carriers (gross revenues of less than ten million dollars annually) include the Butte, Anaconda & Pacific RW and the White Sulphur Springs and Yellowstone Park RW.

[2] The northern route was formerly the Northern Pacific and the southern route the Great Northern prior to their merger with the Chicago, Burlington and Quincy Railroad in 1970.



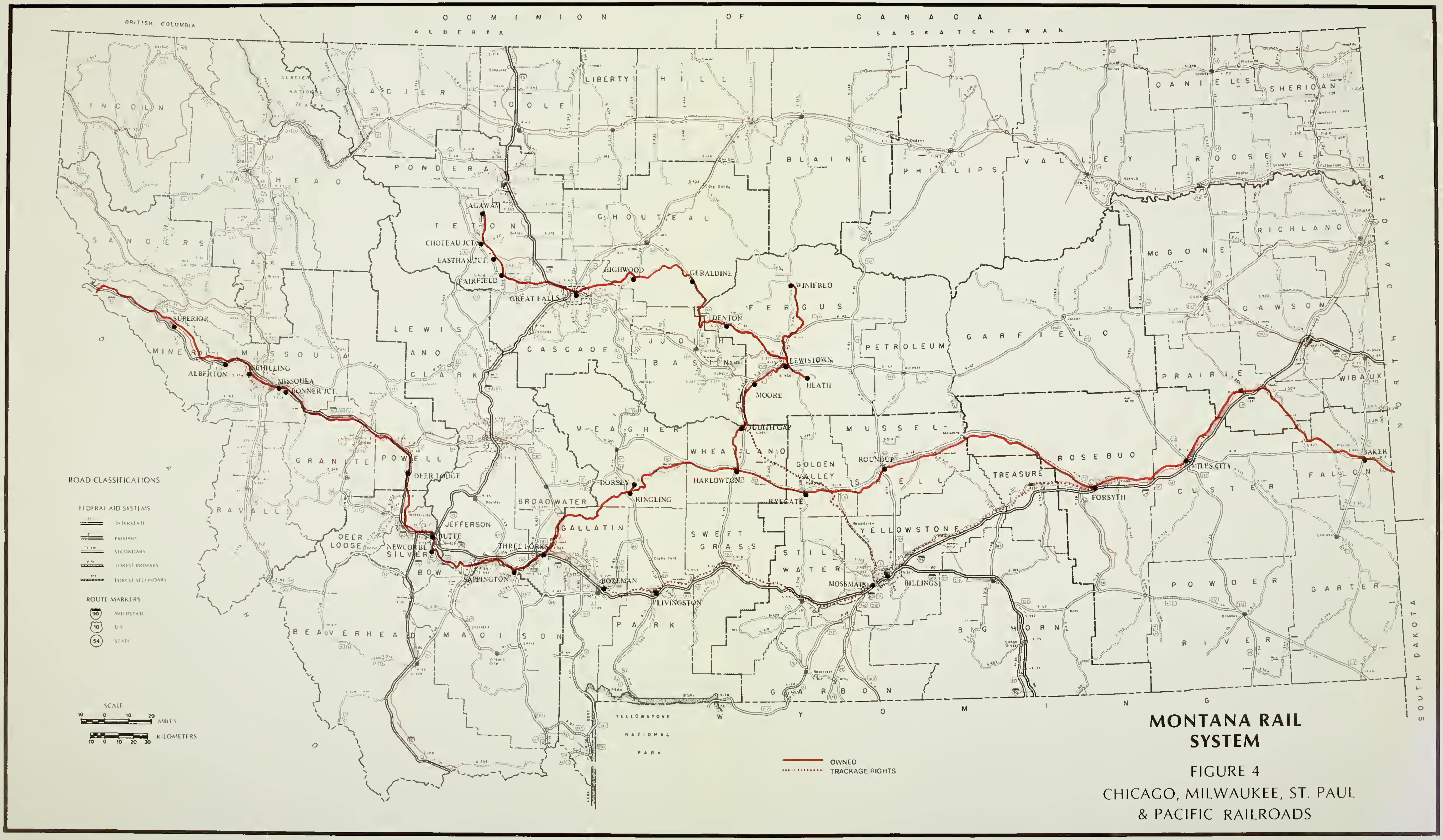
MONTANA RAIL SYSTEM

FIGURE 2
STATE RAIL NETWORK



MONTANA RAIL SYSTEM

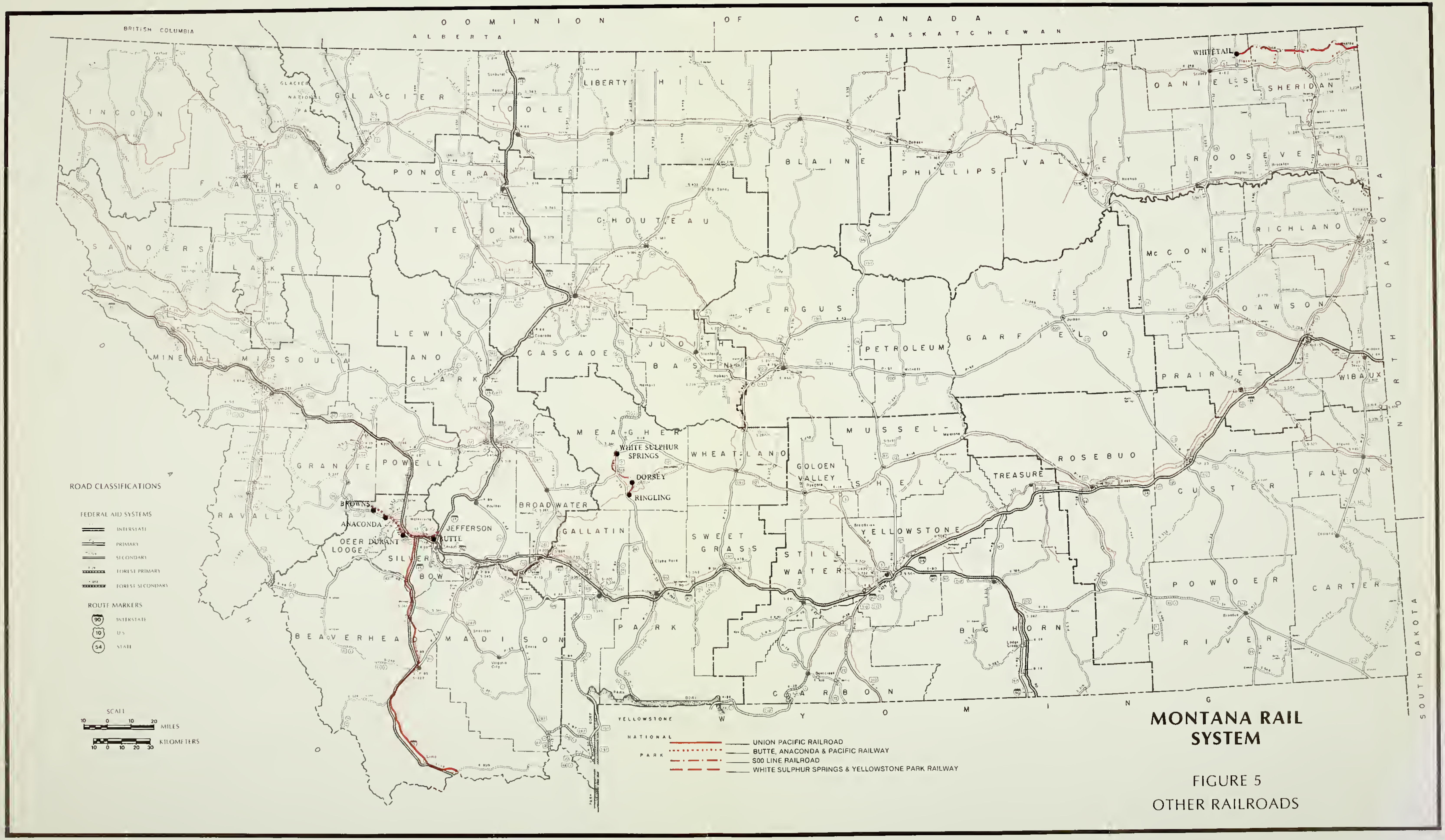
FIGURE 3
BURLINGTON NORTHERN RAILROAD



MONTANA RAIL SYSTEM

FIGURE 4

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RAILROADS



MONTANA RAIL SYSTEM

FIGURE 5
OTHER RAILROADS

Montana to its western termini at Seattle and Portland. The Milwaukee operates 9,800 route miles in 16 states. Its east-west mainline passes through southern and central Montana. The Milwaukee operates 1048 route miles in Montana and originated or terminated approximately 1.5 million tons amounting to roughly $34 million in freight revenues in 1977. The railroad accounted for about 4.5 percent of the state's rail tonnage and 8.5 percent of the total freight revenues in the same year. Figure 4 shows Milwaukee lines in Montana.

The remaining four railroads accounted for about three percent of the state's rail tonnage and total freight revenues in 1977. The Union Pacific operates a line extending north from Pocatello, Idaho, to Butte. The Soo Line operates a branchline west to Whitetail in northeastern Montana. The Butte, Anaconda and Pacific Railway operates an electrified line in the Butte area. The White Sulphur Springs and Yellowstone Park Railway is a tributary to the Milwaukee in central Montana. Figure 5 shows the location of these lines in the state.

B. Operational Characteristics

For analysis purposes, the Montana rail system has been divided into the 57 segments shown in Table 1, which summarizes the following information:

- Railroad line designation and termini (or state border)
- FRA functional class
- FRA track class (maximum)
- Average originating and terminating tonnage in 197_
- Principal traffic generating points
- Major commodities originating and terminating on-line

TABLE 1

RAILROAD ROUTE SEGMENTS IN MONTANA

Railroad ML or BL	Termini or State Border	Length[2/] Miles	FRA Funct Class[3/]	FRA Track Class[4/]	Average 1977 Orig & Term Traffic (tons X 10^3)	% of Total Carloads
BURLINGTON NORTHERN RR						
MD 1st Sub ML	ND Line-Havre	287.2	AM	4	590	1.9
MD 2nd Sub ML	Havre-Conkelley	244.2	AM	4	1,140	3.1
MD 3rd Sub ML	Pacific Jct-Great Falls	119.9	AB	3	380	1.1
MD 4th Sub ML	Great Falls-Sweet Grass	136.8	AB	2,3	260	0.8
MD 5th Sub ML	Mossmain-Great Falls	222.7	AB	4	850	2.9
MD 6th Sub BL	Bainville-Opheim	146.6	BB	3	240	0.7
MD 7th Sub BL	Saco-Hogeland	79.3	BB	2	20	0.1
MD 9th Sub BL	Power-Pendroy	44.5	BB	2	20	-
MD 10th Sub BL	Valier Jct-Valier	17.4	BB	1	50	0.1
MD 11th Sub BL	Spring Creek Jct-Moccasin	21.5	BB	3	10	-
MD 12th Sub BL	Hesper-Rapelje	38.2	BB	2	10	-
YD 1st Sub ML	ND Line-Glendive	39.1	AM	4	70	0.3
YD 2nd Sub ML	Glendive-Forsyth	123.8	AM	4	1,980	7.7
	Forsyth-Huntley	89.3	BM	4		
	Huntley-Laurel	27.6	AM	4		
YD 3rd Sub ML	WY Line-Huntley	102.0	AM	4	10	-
YD 6th Sub BL	ND Line-Carlyle	2.9	BB	1	-	-
YD 7th Sub BL	Glendive-Snowden	70.8	AB	3	940	3.3

% of Total Tonnage	% of Total Revenue	Principal Traffic Generating Points[5/]	Major Commodities Orig & Term On-line[6/]	See Comments
1.8	3.1	Poplar(a), Macon(a) Wolf Point(b), Havre(b)	wheat(75), gasoline(15)	7
3.5	5.9	Hingham(a), Joplin (a), Shelby(a), Union Oil(a), Cutbank (a), Conkelley(d)	wheat(35), bauxite(25), aluminum slabs, ingots (15)	7
1.5	2.1	Big Sandy(a), Fort Benton(a), Carter (a), Black Eagle(c)	wheat(70), copper shapes(20)	
0.8	1.3	Dutton(a), Conrad(b)	wheat(55), barley(20)	
2.6	3.2	Great Falls(d)	wheat(65), food products (20), barley(5)	
0.7	0.8		wheat(80)	
0.1	0.1		wheat(80)	
-	0.1		wheat(80)	8
0.1	0.3		wheat(50), barley(40)	
-	-			9
-	-			
0.2	0.4	Glendive(a)	wheat(35), gravel(25)	10
6.0	8.3	Fallon(a), Hysham(a), East Billings(b), Billings(e), Laurel (c)	bituminous coal(20), petroleum products(15), sugar beets(15), automobiles/trucks(10), food and kindred products (10)	10
-	0.1			
-	-			11
2.8	1.3	Sidney(d), Cecil(c)	lignite(45), sugar beets (30), beet sugar(15)	12

Railroad ML or BL	Termini or State Border	Length[2] Miles	FRA Funct Class[3]	FRA Track Class[4]	Average 1977 Orig & Term Traffic (tons X 10^3)	% of Total Carloads
BURLINGTON NORTHERN RR (cont)						
YD 8th Sub BL	Newlon Jct-Richey	45.1	BB	2	20	0.1
YD 10th Sub BL	Glendive-Brockway	64.3	BB	3	50	0.1
YD 11th Sub BL	Nichols-Big Sky	39.1	BB	2	7,530	18.1
YD 12th Sub BL	Sarpy Jct-Kuehn	35.1	BM	3	4,750	11.3
YD 13th Sub BL	WY Line-Decker	6.0	BM	3	3,570	9.8
RMD 1st Sub ML	Laurel-Livingston	100.5	AM	4	110	0.4
RMD 2nd Sub ML	Livingston-Missoula	242.1	AM	4	1,720	7.5
RMD 3rd Sub ML	Missoula-ID Line	157.6	AM	4	760	4.0
RMD 4th Sub ML	Logan-Butte Butte-Garrison	70.6 51.1	AB BB	4 4	170	0.9
RMD 5th Sub ML	DeSmet-Paradise	92.3	BM	4	580	2.1
RMD 7th Sub ML	WY Line-Laurel	54.4	BM	3	70	0.2
RMD 9th Sub BL	Red Lodge-Silesia	34.5	BB	3	-	-
RMD 10th Sub BL	Mission-Wilsall	23.0	BB	2	10	-
RMD 11th Sub BL	Livingston-Brisbin	10.3	BB	3	10	-
RMD 12th Sub BL	Manhattan-Anceney	15.2	BB	2	10	-
RMD 13th Sub BL	Sappington-Harrison	10.0	BB	2	10	-
RMD 14th Sub BL	Whitehall-Alder	45.6	BB	2	10	-
RMD 15th Sub BL	Great Falls-Helena Helena-Basin	97.8 42.2	AB BB	3 2	350	1.0
RMD 16th Sub BL	Drummond-Philipsburg	26.0	AB	3	10	0.4

% of Total Tonnage	% of Total Revenue	Principal Traffic Generating Points5/	Major Commodities Orig & Term On-line6/	See Comments
0.1	0.1		wheat(80)	
0.1	0.3		wheat(80)	
22.9	11.0	Colstrip(e), Big Sky(e)	bituminous coal(100)	
14.4	10.4	Kuehn(e)	bituminous coal(100)	
10.8	6.7	Decker(e)	bituminous coal(100)	
0.3	0.5	Columbus(a)	chrome/bauxite ores(55), lumber(20), wood chips (15)	10
4.3	6.8	Bozeman(a), Trident (c), East Helena(c) Bradman Spur(a), Bonner(d), Missoula (c)	sawlogs(45), lumber(10), cement(5), lead/copper concentrates(5)	10
2.3	1.6	Woodlin(d), Brownman (a), Thompson Falls (b)	sawlogs(75), lumber(10), wood chips(10)	10
0.5	1.3	Three Forks(a), Butte(a)	non-metallic minerals(30), food & kindred products (20), coke(10)	
1.8	2.5	Schilling(d), Cedars(a)	fiberboard(40), sawlogs (35), lumber(15), wood chips(5)	
0.2	0.2		stone(60)	
-	-			
-	-			
-	-			
-	-			
-	-			
0.3	0.6	Alder(a)	talc(90)	
1.1	1.1	Montana City(c)	cement(60), abrasives (10), wood chips(10), wheat(10)	
-	-			

Railroad ML or BL	Termini or State Border	Length 2/ Miles	FRA Funct Class 3/	FRA Track Class 4/	Average 1977 Orig & Term Traffic (tons X 10^3)	% of Total Carloads
BURLINGTON NORTHERN RR (cont)						
RMD 17th Sub BL	Missoula-Darby	65.9	BB	3	20	0.1
RMD 18th Sub BL	Dixon-Polson	33.4	AB	3	140	0.6
RMD 19th Sub BL	Haugan-ID Line	19.7	BB	2	2,680	7.1
SD 1st Sub ML	Conkelley-ID Line	141.7	AM	4	920	3.6
SD 12th Sub BL	Stryker-Eureka	23.2	BB	2	130	0.5
SD 17th Sub BL	Columbia Falls-Somers	24.9	BB	2	140	0.6
CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RR						
DD 4th Sub ML	SD Line-Miles City	114.7	BM	4	50	0.4
MD 3rd Sub ML	Miles City-Harlowton	216.7	BM	4	90	0.3
MD 4th Sub ML	Harlowton-Three Forks	113.9	BM	4	10	-
MD 5th Sub ML	Three Forks-Deer Lodge	112.1	BM	4	150	0.9
MD 6th Sub ML	Deer Lodge-Alberton	110.8	BM	4	490	1.9
MD 7th Sub ML	Alberton-ID Line	77.5	BM	4	-	-
MD 10th Sub BL	Harlowton-Lewistown Yard	61.3	AB	3	20	0.1
MD 11th Sub BL	Lewistown Yard-Heath	9.2	BB	2	20	0.2
MD 12th Sub BL	Winifred Jct-Winifred	42.7	BB	2	10	-
MD 13th Sub BL	Lewistown Yard-Falls Yard	134.5	AB	3	220	0.5
MD 14th Sub BL	Falls Yard-Agawam	55.6	BB	2	300	1.1
UNION PACIFIC RR						
ID 4th Sub ML	ID Line-Butte	133.3	BM	4	650	2.1

% of Total Tonnage	% of Total Revenue	Principal Traffic Generating Points5/	Major Commodities Orig & Term On-line6/	See Comments
0.1	0.1		lumber(70)	
0.4	0.4	Dunham(b)	wood chips(40), lumber (30), sawlogs(20)	
8.1	9.2	Deborgia(e)	bituminous coal(100)	13
2.8	6.0	Columbia Falls(b), Libby(d), Troy(a)	lumber(45), wood chips (20), non-metallic minerals(15), sawlogs(10)	7
0.4	0.9	Fortine(a), Eureka(a)	lumber(70), wood chips(25)	
0.4	1.0	Kalispell(b)	lumber(50), wood chips(35), sawlogs(10)	
0.1	0.4		sugar beets(20)	
0.3	0.3		bentonite(50), wheat(20)	
-	-		wheat(50)	
0.4	1.0	Butte(a), Deer Lodge(a)	lumber(25), wood chips (20), food products(10)	
1.5	2.9	Bonner(a), Missoula (a), Schilling(c)	fiberboard(30), wood chips(25), lumber(25), chemicals(10)	
-	-			
0.1	0.1		wheat(70), barley(30)	
0.1	0.2		gypsum(30), wallboard(30), paper(20)	
-	0.1		wheat(90)	
0.7	1.2	Lewistown(a), Denton (a), Geraldine(a)	wheat(70), barley(30)	
0.9	1.6	Great Falls(b), Fairfield(a)	wheat(30), barley(15), primary copper shapes(20)	14
2.0	1.3	Barretts(a), Maiden Rock(a), Silver Bow (d)	phosphate rock(25), crusted rock(20), prophillite(15), coke(15)	

TABLE 1

RAILROAD ROUTE SEGMENTS IN MONTANA
(Continued)

Railroad ML or BL	Termini or State Border	Length[2] Miles	FRA Funct Class[3]	FRA Track Class[4]	Average 1977 Orig & Term Traffic (tons X 10^3)	% of Total Carloads
SOO LINE RAILROAD CO.						
WD 6th Sub BL	Whitetail-ND Line	56.9	BB	2	50	0.1
BUTTE, ANACONDA & PACIFIC RAILWAY CO.						
ML	Butte-Anaconda	25.7	-	2	unk.	0.1
Brown's Spur	Anaconda-Brown	6.2	-	2		
WHITE SULPHUR SPRINGS & YELLOWSTONE PARK RAILWAY CO.						
ML	Ringling-White Sulphur Springs	22.9	-	1	60	0.1

1/ Abbreviations used include the following:

ML	Mainline. Line handles through (bridge) traffic in addition to serving locally originating or terminating traffic.
BL	Branchline. Line handles only local originating or terminating traffic.
Sub.	Subdivision
MD	Montana Division, Burlington Northern RR
SD	Spokane Division, Burlington Northern RR
RMD	Rocky Mountain Division, Burlington Northern RR
YD	Yellowstone Division, Burlington Northern RR
DD	Dakota Division, Chicago, Milwaukee, St. Paul and Pacific RR
MD	Montana Division, Chicago, Milwaukee, St. Paul and Pacific RR
WD	Western Division, Soo Line RR
ID	Idaho Division, Union Pacific Railroad

2/ Does not include industrial tracks or spurs.

3/ Source: U. S. Department of Transportation, Final Standards, Classification, and Designation of Lines of Class 1 Railroads in the United States, Volume II, January 19, 1977. Codes used are as follows:

AM - Category A mainline
BM - Category B mainline
AB - Category A branchline
BB - Category B branchline

No designation is shown for Class II railroads or subsidiaries of Class I railroads.

% of Total Tonnage	% of Total Revenue	Principal Traffic Generating Points[5]	Major Commodities Orig & Term On-line[6]	See Comments
0.2	0.3		wheat(90)	
0.7	0.8	Anaconda(a)		
0.2	0.2	White Sulphur Springs(a)	wood chips(75), wheat (20)	15

4/ Track Class for freight operations:
- 1 - Maximum speed of 10 mph
- 2 - Maximum speed of 25 mph
- 3 - Maximum speed of 40 mph
- 4 - Maximum speed of 60 mph
- 5 - Maximum speed of 80 mph

Owning railroads may permanently or temporarily restrict maximum operating speeds to lower limits. More complete information on allowable speeds is given in railroad timetables and slow orders.

5/ Stations generating and/or receiving 50,000 tons of traffic per year in 1977. Codes following station name indicate approximate amount of traffic as follows:
- a - 50 to 100,000 tons/year
- b - 100 to 200,000 tons/year
- c - 200 to 400,000 tons/year
- d - 400 to 800,000 tons/year
- e - over 800,000 tons/year

6/ Figures in parenthesis indicate approximate percentages of the major commodities shipped or received on portion of mainline or branchline. Percentages determined on basis of the number of carloads reported in the FRA/ICC one percent waybill sample for 1977.

NOTES:

7. Segment is a portion of the Hi-Line Route. Passenger service is provided via NRPC Trains 7/8 (service frequency - four trips per week in each direction).

8. Joint BN-MILW ownership between Eastham Jct and Choteau Jct, with MILW maintenance.

9. BN has trackage rights over 9.0 miles of MILW trackage between Spring Creek Jct and Lewistown.

10. Passenger service is provided via NRPC Trains 17/18 (service frequency - three trips per week in each direction).

11. Total branchline length is 20.8 miles from Beach to Carlyle.

12. Actual distance is 79.5 miles of which 8.7 miles is in North Dakota.

13. BN has trackage rights over 18.7 miles of MILW trackage between St. Regis and Haugan.

14. Joint BN-MILW ownership between Emerson Jct and Dracut Jct, with BN maintenance.

15. MILW owns 3.5 miles of track which is leased to the WSS & YP.

The data shown in the table identify the importance of each segment in terms of the amount and type of traffic generated. The table also indicates the functional importance of each segment and the general physical condition of the track structure. Most segments only carry traffic originating or terminating on the line (or a connecting line) and hence, their reason for being lies in the traffic generated. Through or overhead (interstate) traffic is largely restricted to 17 segments (ten Burlington Northern, six Milwaukee, and one Union Pacific) classified as being mainlines in the table. Several of the mainline segments also originate and terminate significant tonnages; others generate very little traffic (e.g., the six Milwaukee mainline segments).

Figure 6 shows, in graphic form, the classification of rail lines in Montana. All lines are classified into one of five groups which were established by FRA in response to the study mandated by Section 503 of the 4R Act. These groups are defined below:1/

	Category	Description
A	Mainline	Meets at least one of the following tests: 1. High freight density. Carries at least 20 million gross tons per year. 2. Serves major markets. Provides rail route linkage for transportation planning zones generating at least 75,000 carloads of freight annually. 3. National defense route. Route essential in the Strategic Rail Corridor Network (STRACNET).

1/ U. S. Department of Transportation, Final Standards, Classification, and Designation of Lines of Class I Railroads in the United States, January 19, 1977, pp. 40-43.

Category	Description
B Mainline	A through or feeder route which carries less than 20 million gross tons, but at least 5 million gross tons annually and which fails to qualify for Category A mainline status on the basis of either the need to provide service to major markets or considerations of national defense.
A Branchline	A rail route handling at least 1.0 but less than 5.0 million gross tons.
B Branchline	A rail route carrying less than 1.0 million gross tons
Class II R.R.	Gross revenue of less than $10 million per year.

Category A mainlines comprise 30 percent of the route mileage in Montana. They include most of the Burlington Northern's two east-west mainlines and the "coal" line across Wyoming to Lincoln, Nebraska.[1] The northern route carries roughly 27 to 30 million gross tons per year, whereas the traffic density on the southern route runs between 12 and 15 million gross tons east of Huntley and increases to 35 million gross tons east of Glendive from coal shipments originating in southeastern Montana. Traffic on the route to Lincoln presently averages around 12 million gross tons for the portion of the line within Montana. These density figures represent the total weight of locomotives, cabooses, freight cars (empty) and commodities passing over a track during a particular

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[1] More specifically, the BN Montana Division - 1st and 2nd Subdivisions, and the BN Spokane Division - 1st Subdivision (the Hi-Line Route); the BN Yellowstone Division - 1st and 2nd Subdivisions and the BN Rocky Mountain Division - 1st, 2nd and 3rd Subdivisions (the southern route); and the BN Yellowstone Division - 3rd Subdivision.

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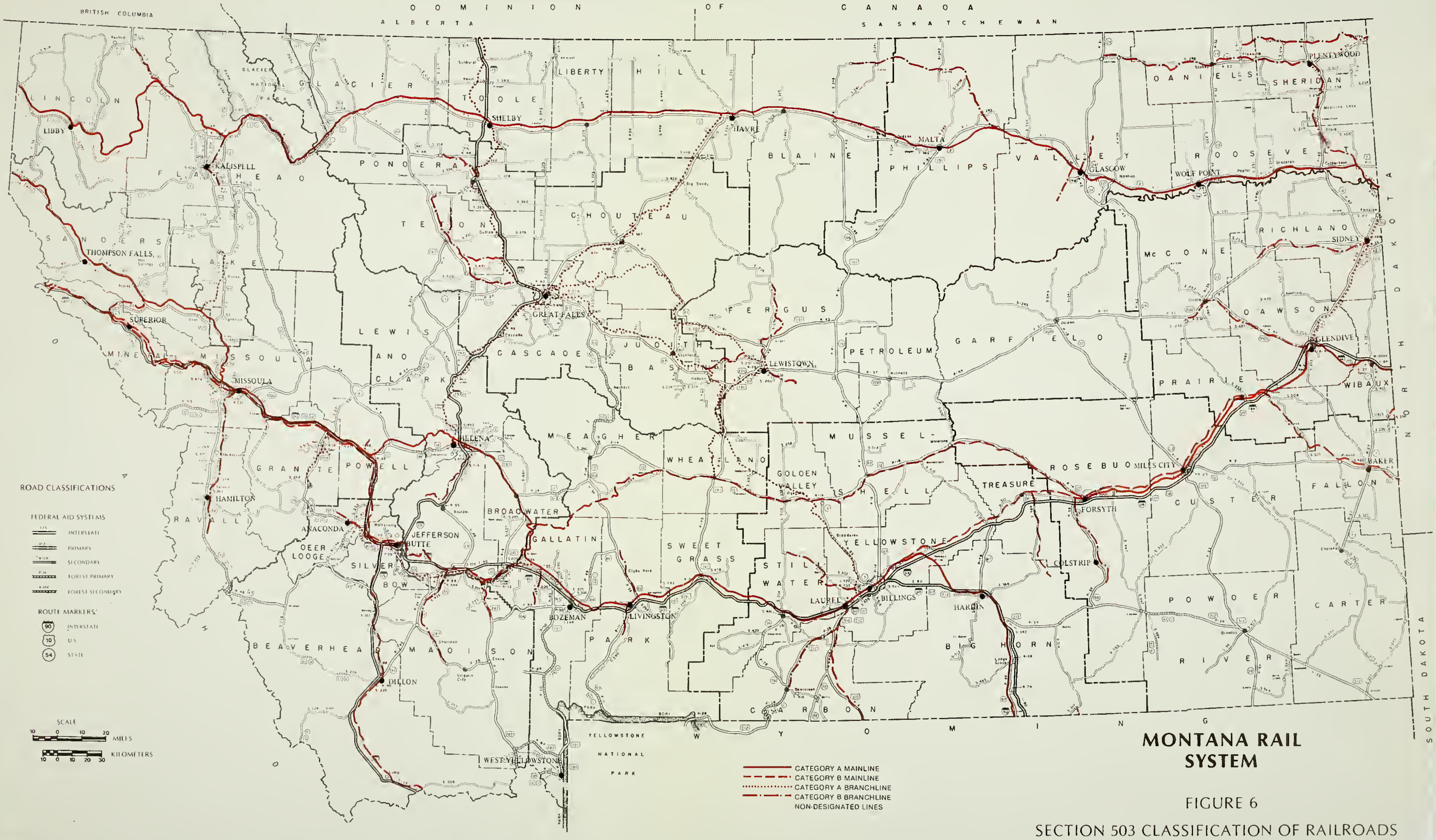

MONTANA RAIL SYSTEM

FIGURE 6

SECTION 503 CLASSIFICATION OF RAILROADS

year (1977 or 1978). While these figures are not particularly large (mainlines in other parts of the country carry appreciably higher tonnages), they occur over lines which are largely single track with frequent passing sidings.

Category B mainlines constitute 24 percent of the route mileage in Montana. They include the Milwaukee east-west mainline through central Montana, a portion of the Burlington Northern's southern east-west mainline, the Burlington Northern's north-south line through Casper, Wyoming and the Burlington Northern's spur to St. Regis (between Paradise and DeSmet), and the Union Pacific's north-south line between Butte and Pocatello, Idaho.[1/] The Milwaukee carries between ten and eleven million gross tons per year on its mainline across Montana.[2/] The Burlington Northern line carries around 17 million gross tons and the Union Pacific line a little over five million tons each year.

Category A branchlines constitute 23 percent of the route mileage in Montana. Eleven different lines having densities ranging from less than one up to four million gross tons per year are included in this category.[3/]

[1/] More specifically, the MILW Dakota Division - th Subdivision, the MILW Montana Division - 1st, 2nd, 3rd, 4th, and 5th Subdivisions; the BN Yellowstone Division - 2nd Subdivision between Huntley and Forsyth; the BN Rocky Mountain Division - 5th and 7th Subdivisions; and the UP Idaho Division - 4th Subdivision.

[2/] Based on 1977 traffic. Recent traffic is considerably less given the severe financial problems faced by the Milwaukee.

[3/] The eleven lines are the BN Montana Division - 3rd, 4th and 5th Subdivisions; the BN Yellowstone Division - 7th and 12th Subdivisions; the BN Rocky Mountain Division - 4th, 15th, 16th, and 18th Subdivisions; the MILW Montana Division - 10th and 13th Subdivisions.

Category B branchlines account for 21 percent of the route mileage. Most lines have densities of less than 500 thousand tons per year. Category B branchlines are the ones most likely to be abandoned in the future by the owning railroads.

Shown separately are Class II railroads, which for the most part carry traffic volumes of one million tons or less per year. These railroads account for about one percent of the total route mileage.

Figure 7 shows the general types of signalization systems used on rail lines in Montana. Most mainlines have either automatic block or traffic control systems.[1/] Branchlines invariably rely on timetables and train orders.

Figure 7 also shows the maximum allowable operating speeds for freight trains. This does not mean that these speeds are being uniformly achieved. Most lines have occasional speed restrictions of both a permanent and temporary nature. The former occurs on account of (1) permanent physical constraints such as sharp horizontal curves or long structures, (2) local ordinances limiting train speeds through congested areas, and (3) interlockings or turnouts which require reduced speeds. The latter often reflects a lowering of speeds until deferred maintenance needs can be met. Occasionally a railroad will further restrict operating speeds to something less than the maximum allowable for that track class for

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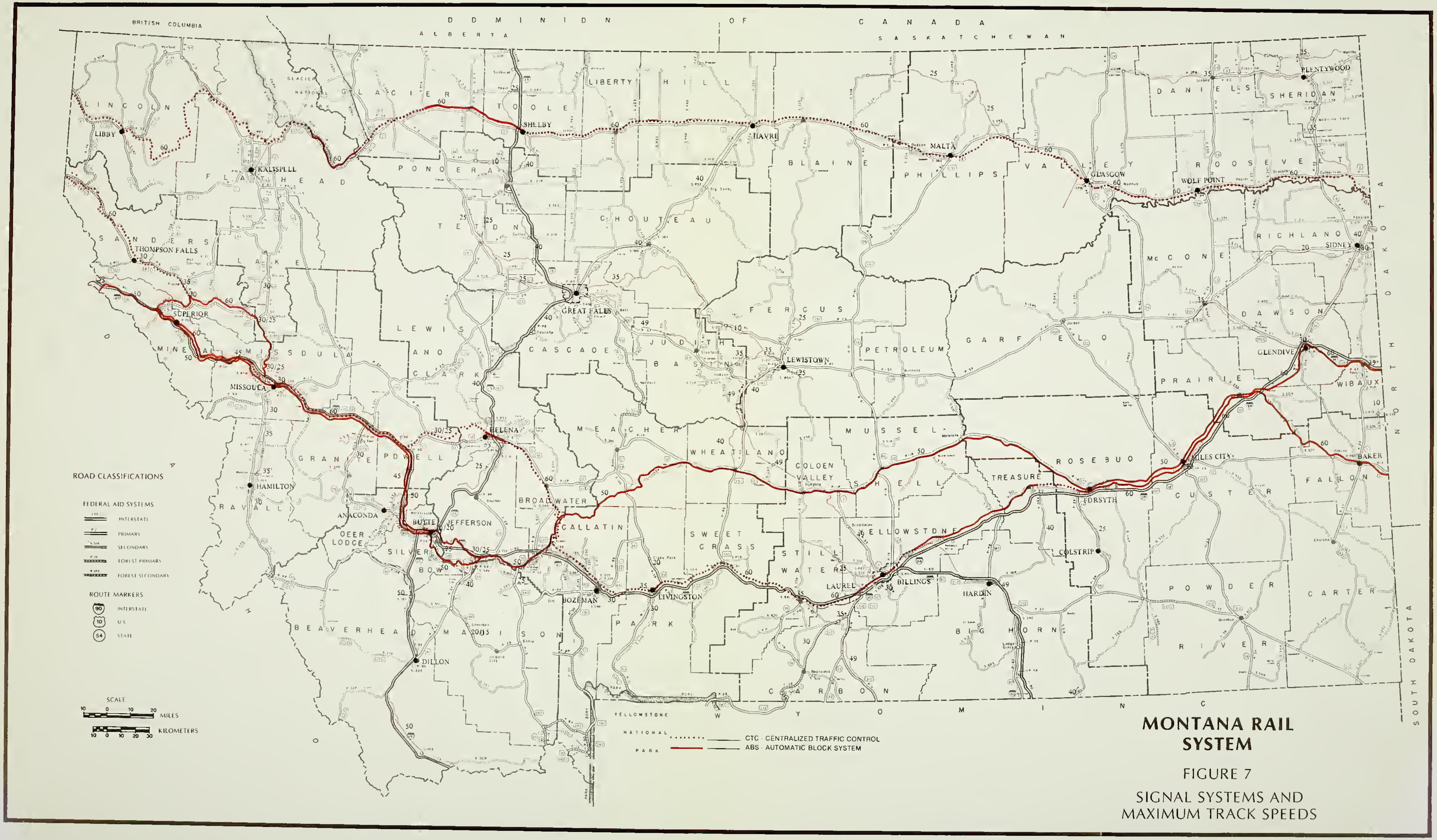
[1/] The three exceptions are the UP's Idaho Division - 4th Subdivision, which has an automatic block system over only a small portion of its total length, the Burlington Northern's Yellowstone Division - 3rd Subdivision, and the Burlington Northern's Rocky Mountain Division - 7th Subdivision.



MONTANA RAIL SYSTEM

FIGURE 7

SIGNAL SYSTEMS AND MAXIMUM TRACK SPEEDS

other reasons. In general, the Union Pacific and Burlington Northern tracks are well maintained, thus permitting maximum operating speeds. On the Milwaukee, deferred maintenance has reached the point where trains are often being restricted to 10 mph (or less) operating speeds even though the maximum timetable speed is 25 or 40 mph. This obviously is an untenable situation over the long term.

C. System Usage

One way of showing overall system usage is by means of a density diagram, such as that shown in Figure 8. This figure shows gross traffic densities (in millions of tons per year) in terms of symbols representing five different density ranges. Such diagrams, however, cannot focus on how the rail system is presently being used and what the prospects are for the future.

Rather than simply reporting the tonnages of different commodities carried in the recent past, the need is to understand how the rail system interacts with and supports key sectors of the state's economy. Such an understanding cannot be obtained without an appreciable investment in staff resources and time to carry out micro-scale economic studies having the objective of pinpointing present and future relationships between transport cost and capital investment on one hand and economic activity on the other. All that can be done at this point is to focus on the key commodities presently moving by rail.

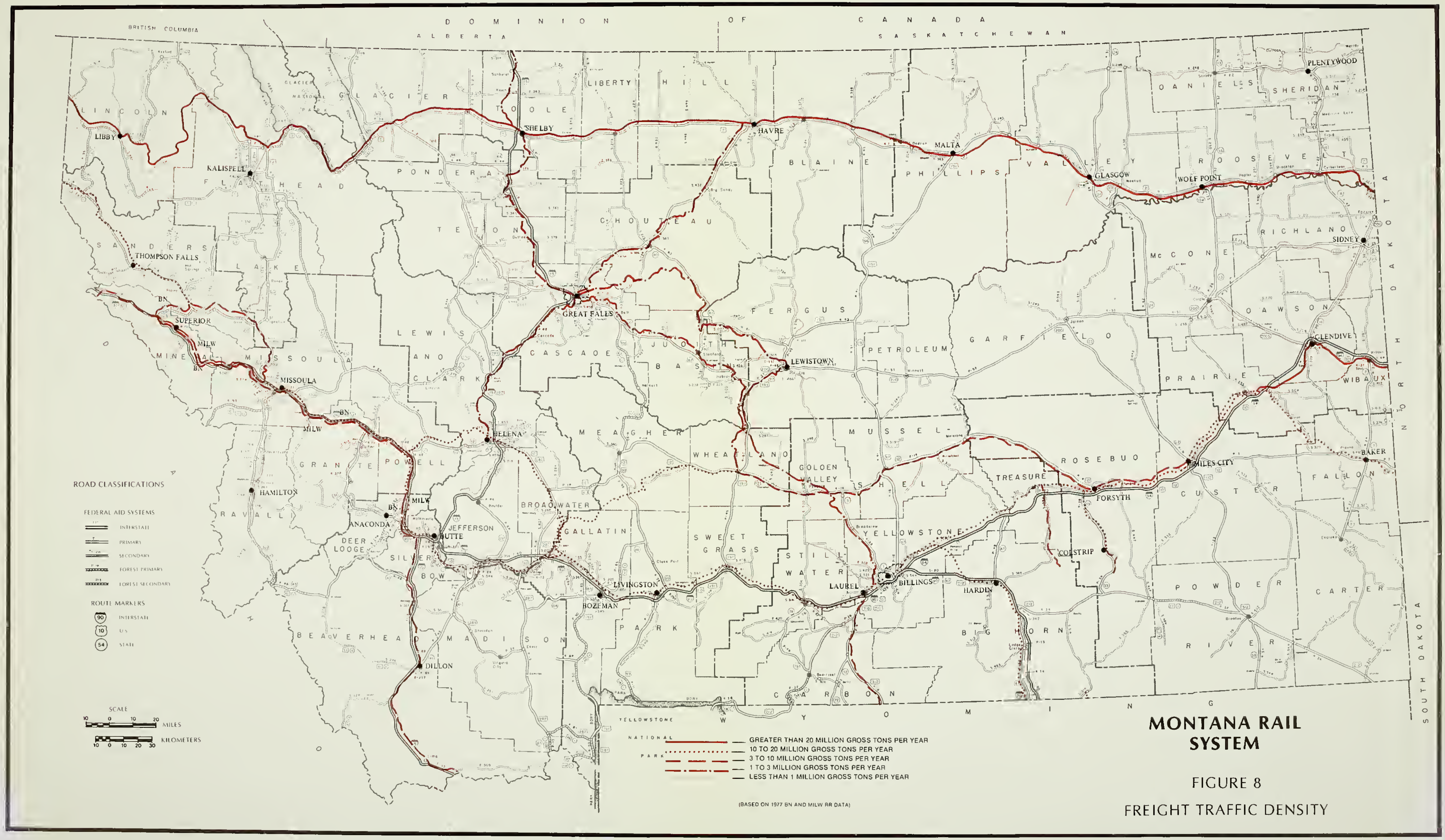
The strength of the rail system in Montana is that it originates far more tonnage than it terminates. In 1977, 24.5 million tons of interstate traffic and 3.2 million tons of local traffic originated in Montana. Only 5.2 million tons were shipped into Montana. A

large proportion of the originating grain traffic was destined to regional markets. Coal shipments were largely to the Midwest and lumber to national markets. On the other hand, most of the traffic coming into the state originated in neighboring or nearby states.

Table 2 provides a profile of the ten major Montana-originating commodities transported by rail. These specific commodities accounted for 95 percent of the originating tonnage and 90 percent of the corresponding freight revenues in 1977. Many of the commodities had average hauls of 1500 to 2000 miles and produced revenues of around $2000 per carload.

Table 3 provides a similar profile of the ten major Montana-terminated commodity groups transported by rail. While the top ten commodity groups in total accounted for 89 percent of the terminating tonnage and 60 percent of the corresponding revenues, the characteristics of the individual commodities in each group varied appreciably.

What are the prospects for the future? Will the rail system continue to lose traffic to motor carriers as has been the pattern in recent years? These are difficult but tremendously important questions. The country is entering into a period of considerable uncertainty regarding modal competition. On one hand, there are signs that the gradual shift away from rail to motor carrier may diminish (or even reverse) as the costs of replacement equipment, insurance and fuel continue to escalate. On the other, the shift away from rail for the transport of at least several of the major originating commodities (e.g., wheat, lumber) may continue unless service and car supply is improved. The advent of motor carrier



MONTANA RAIL SYSTEM

FIGURE 8

FREIGHT TRAFFIC DENSITY

TABLE 2

PROFILE OF THE TEN MAJOR MONTANA-ORIGINATING COMMODITY GROUPS TRANSPORTED BY RAIL[1]

Commodity Group [2]	Approx Annual Tonnage (000)	Principal MT Origins	Major Termination Points (within & outside of MT) [3]	Relative Importance (incl. % of total) Tonnage	Relative Importance (incl. % of total) Revenue
Coal and Lignite	18,500	Kuehn, Decker, Colstrip, Big Sky, & Deborgia (bit coal), Cecil (lignite)	Minnesota (53%), Illinois (29%), Wisconsin (12%), Montana (6%)	1st 67.7%	1st 44.9%
Wheat	2,550	Hi-Line Counties, Golden Triangle, NE and Central MT	Washington (60%), Oregon (30%), Montana (10%)	2nd 9.2%	2nd 13.7%
Lumber	1,000	Western MT (Columbia Falls, Libby, Bonner, Missoula, etc.)	National (25% Midwest, 15% Plains, 15% Northeast, 10% Atlantic states)	3rd 3.6%	3rd 12.9%
Wood Chips	1,000	Western MT (Libby, Missoula, etc.)	Regional (Washington, Oregon, Montana)	4th 3.6%	9th 2.3%
Non-metallic Minerals (14)	700	Libby, Bradman Spur, Alder	Partly national, partly regional (Oregon, Washington)	5th 2.5%	4th 3.3%
Saw Logs	600	Thompson Falls, Woolin, Troy	Mostly local (Missoula, Schilling), some Washington	6th 2.1%	10th 1.1%
Clay, Concrete, Glass or Stone Products (32)	500	Montana City, Trident, Three Forks, Barretts	Midwest (non-metallic minerals) Regional (cement)	7th 1.8%	8th 2.6%
Petroleum Products (29)	500	Billings, Union Oil	Regional and Midwest (asphalt, residual oil, petroleum coke)	8th 1.7%	7th 2.8%
Barley	400	Hi-Line Counties, Golden Triangle, Central MT	Washington (30%), Oregon (30%), Minnesota (15%), Montana (15%)	9th 1.4%	6th 3.2%
Pulp, Paper & Allied Products (26)	350	Schilling	Midwest, Northwest, (fiberboard)	10th 1.3%	5th 3.3%

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[1] Based on an analysis of the 1977 FRA/ICC waybill sample.

[2] Numbers in parentheses are the corresponding 2-digit STCC code for that group; all other commodity groups are identifiable at the 5-digit STCC code level.

[3] Internal Montana traffic: 14% carloads, 12% tonnage, and 5% revenues.

TABLE 3

PROFILE OF THE TEN MAJOR MONTANA-TERMINATING COMMODITY GROUPS TRANSPORTED BY RAIL[1]

Commodity Group [2]	Approx Annual Tonnage (000)	Major Origination Points (within & outside of MT) [3]	Principal MT Destinations	Relative Importance (incl. % of total) Tonnage	Revenue
Coal and Lignite	1,100	Montana (Colstrip - coal, Cecil - Lignite), Wyoming	Billings, Sidney	1st 21.9%	6th 5.6%
Saw Logs	800	Montana (Woodlin, Thompson Falls, Cedars, Dunham, Libby, Silver City, Philipsburg)	Missoula, Schilling	2nd 15.5%	7th 3.6%
Wheat	550	Hi-Line Counties, Golden Triangle, N.E. & Cent. MT	Great Falls	3rd 10.5%	4th 7.1%
Metallic Ores (10)	450	Washington (bauxite ores), Washington, Colorado (lead concentrates)	Conkelley, East Helena	4th 8.6%	3rd 8.1%
Non-Metallic Minerals (14)	400	Idaho (phosphate rock), Montana (crushed stone)	Silver Bow, Sidney	5th 7.8%	8th 2.5%
Petroleum Products (29)	300	Montana (Union Oil) Midwest (coke)	Billings, Silver Bow	6th 5.4%	2nd 9.5%
Sugar Beets	250	Montana (eastern and central portion of state)	Sidney, Billings	7th 5.3%	9th 1.6%
Food and Kindred Prod. (20)	250	Northwestern and Midwestern States, some local	Billings, Great Falls	8th 4.9%	1st 10.7%
Chemicals (28)	200	Washington, Utah, Midwest, etc.	None	9th 3.9%	5th 6.9%
Wood Chips	150	Deer Lodge, Barnetts, White Sulphur Springs, etc.	Schilling	10th 3.2%	7th 1.3%

1/ Based on an analysis of the 1977 FRA/ICC waybill sample.

2/ Numbers in parentheses are the corresponding 2-digit STCC code for that group; all other commodity groups are identifiable at the 5-digit STCC code level.

3/ Internal Montana traffic: 54% carloads, 61% tonnage, and 21% revenues.

deregulation could have a major impact upon whether the rail system can compete more effectively than it has in the past few years. Thus, projections of market shares and rail volumes are simply not possible in the face of the major changes expected over the next decade.

While the rail system is primarily geared to freight transport, a limited amount of long-distance, intercity rail passenger service is provided by the National Rail Passenger Corporation (Amtrak). Figure 9 shows the routes having rail passenger service as of 1979. Transcontinental east-west service across northern Montana via Havre is provided on a four-day-per-week basis. Transcontinental east-west service across southern Montana via Billings and Butte is provided on a three-day-per-week basis.1/

To what extent is existing rail service used for travel to and from points in Montana? Table 4 shows the total number of persons getting on and off the two trains, by Montana stations, for FY 1978. The table indicates that the Empire Builder had a slightly higher total patronage than the North Coast Hiawatha. However, if frequency of service differences are taken into account (the Empire Builder operates four days per week, whereas

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1/ In the Final Report to Congress on the Amtrak Route System (U. S. Department of Transportation, January 1979) the Secretary recommended discontinuance of rail passenger service over the southern route, effective October 1, 1979, and daily service on the northern route. This report was in response to Section 4 of the Amtrak Improvement Act of 1978 (P.L. 95-421). Congress recently rejected a proposed one-year moratorium on USDOT's service reduction plan. Pending legislation reducing the extent of the service cutback is not expected save the North Coast Hiawatha, however.

TABLE 4

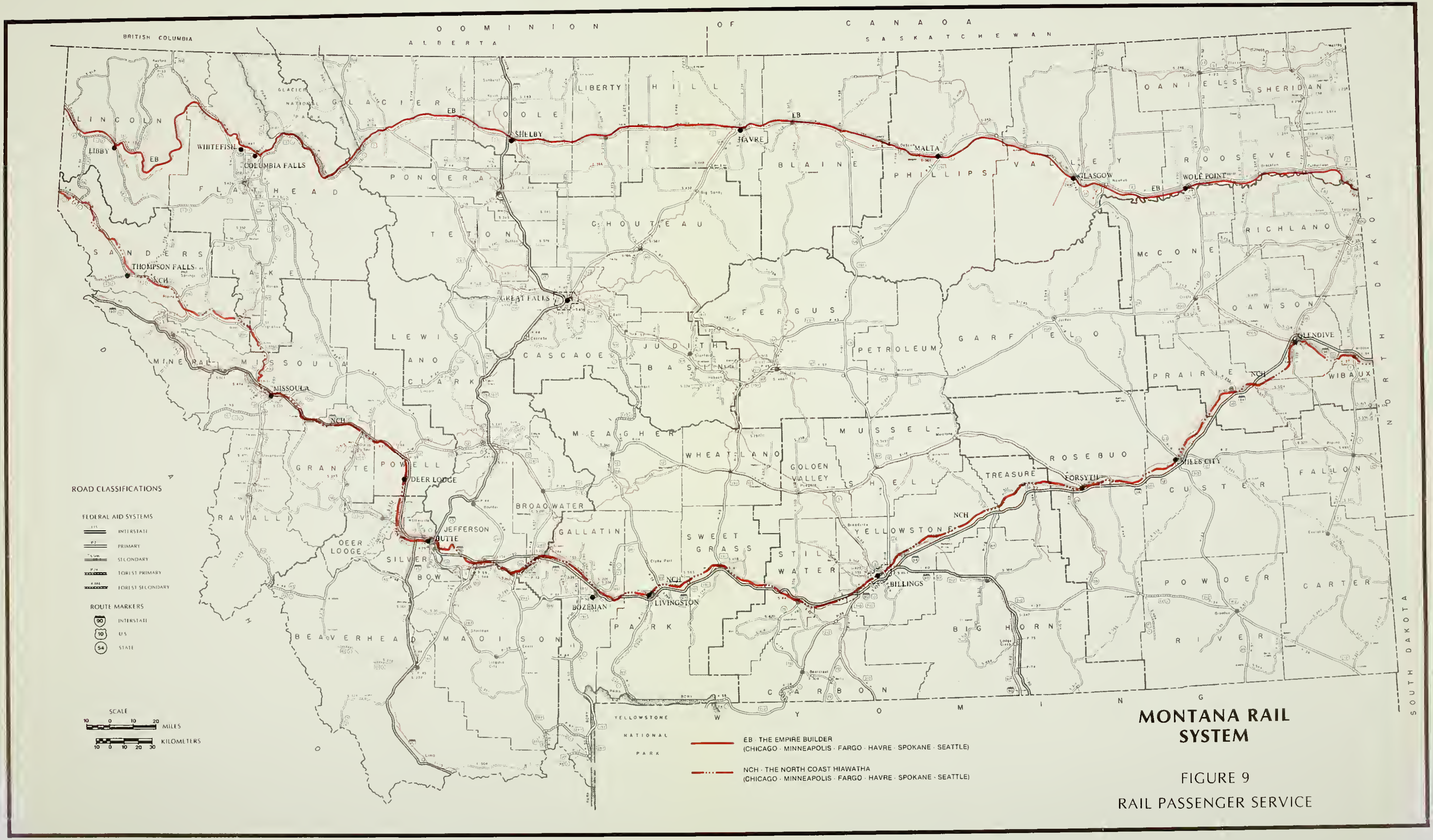
AMTRAK ON/OFF FISCAL YEAR 1978
MONTANA STATIONS

NORTHERN ROUTE

Station	On	Off
WPT (Wolf Point)	2,376	2,356
GGW (Glasgow)	2,906	2,782
MAL (Malta)	1,146	1,178
HAV (Havre)	6,116	6,040
SBY (Shelby)	2,253	2,464
CUT (Cut Bank)	1,414	1,261
BRO (Browning)	354	360
GPK (Glacier Park)	1,726	2,333
BTN (Belton)	1,227	1,061
WFH (Whitefish)	9,795	9,938
LIB (Libby)	1,426	1,420
TOTAL	30,739	31,193

SOUTHERN ROUTE

Station	On	Off
GLD (Glendive)	2,723	2,521
MLS (Miles City)	1,511	1,616
FYT (Forsyth)	508	482
BLG (Billings)	6,671	7,092
LVG (Livingston)	2,466	2,954
BOZ (Bozeman	3,415	3,180
BUT (Butte)	2,707	2,984
DRL (Deer Lodge)	494	427
MLA (Missoula)	6,194	6,255
PDS (Paradise)	543	577
	27,232	28,088



MONTANA RAIL SYSTEM

FIGURE 9

RAIL PASSENGER SERVICE

the North Coast Hiawatha only three), the train on the southern route has somewhat higher usage per run.

Tables 6 and 7 show Amtrak ridership between Montana stations and to and from points east and west of the state for the last three months of 1978. Over 60 percent of the travel was to or from locations outside of Montana, of which two-thirds was to the Pacific Northwest and one-third to the East and Midwest. Both trains arrive and depart during daytime or early evening hours from most stations in Montana.

D. Pending System Adjustments

Of the rail-related issues facing Montana, none is more important or immediate than the financial plight of the Milwaukee, the ultimate outcome of which is difficult to predict. It has and will continue to have a major impact on state rail planning in Montana.

The origins of the dire financial situation faced by the Milwaukee stem from annual losses incurred on a more or less regular basis during the 1970's which finally resulted in bankruptcy being declared on December 19, 1977. Normally when such an event occurs, the firm involved is closed down and the assets are then disposed

TABLE 5

AMTRAK RIDERSHIP FROM MONTANA STATIONS (OCT. 1, 1978 - DEC. 31, 1978)1/

NORTHERN ROUTE

		Destination												
	Station	WPT	GGW	MAL	HAV	SBY	CUT	GPK	BTN	WFH	LIB	Pacific Northwest2/	East and Midwest3/	Total Ons
Origin	Wolf Point (WPT)	-	7	16	66	38	47	7	0	265	29	444	311	1,230
	Glasgow (GGW)	5	-	1	332	32	42	5	8	205	21	493	450	1,594
	Malta (MAL)	11	1	-	33	9	10	6	0	56	6	175	671	978
	Havre (HAV)	37	189	37	-	72	105	33	21	629	46	849	704	2,722
	Shelby (SBY)	21	19	2	33	-	4	4	2	233	51	441	229	1,039
	Cut Bank (CUT)	29	21	6	47	1	-	7	8	198	11	358	94	780
	Glacier Park (GPK)	5	5	0	20	1	3	-	0	77	8	147	31	296
	Belton (BTN)	0	5	0	11	0	3	0	-	10	0	64	22	115
	Whitefish (WFH)	138	103	27	302	120	95	60	4	-	46	2,473	1,992	5,360
	Libby (LIB)	13	9	4	24	26	7	4	0	18	-	443	123	671
	Pacific Northwest	222	233	79	445	218	218	75	30	1,285	215	-	-	3,020
	East and Midwest	634	740	256	1,449	461	194	54	39	1,790	242	-	-	5,859
	TOTAL OFFS	1,115	1,332	428	2,762	978	728	255	112	4,766	675	5,887	4,627	

1/ Frequency of passenger service - 4 days per week.
2/ Principal destinations from Montana stations to the west are Spokane and Seattle.
3/ Principal destinations from Montana stations to the east are Williston, Minot, Grand Forks, Minneapolic-St. Paul and Chicago.

TABLE 6

AMTRAK RIDERSHIP FROM MONTANA STATION (OCT. 1, 1978 - DEC. 31, 1978)1/

SOUTHERN ROUTE

Origin

	Destination												
Station	GLD	MLS	FYT	BLG	LVG	BOZ	BUT	DRL	MLA	PDS	Pacific Northwest2/	East and Midwest3/	Total Ons
Glendive (GLD)	-	14	24	302	58	140	83	14	230	4	266	316	1,451
Miles City (MLS)	10	-	1	85	15	79	45	7	115	3	202	156	718
Forsyth (FYT)	13	0	-	51	9	21	7	16	26	0	72	69	284
Billings (BLG)	202	53	27	-	115	228	152	28	522	15	1,006	806	3,154
Livingston (LVG)	32	8	6	62	-	67	25	0	96	6	363	174	839
Bozeman (BOZ)	59	35	14	112	40	-	25	5	97	16	475	377	1,255
Butte (BUT)	35	19	4	76	13	15	-	123	62	12	756	192	1,307
Deer Lodge (DRL)	6	2	9	15	0	3	123	-	96	1	122	22	399
Missoula (MLA)	120	57	10	269	49	51	31	94	-	16	1,546	551	2,851
Paradise (PDS)	3	2	0	9	2	9	5	0	6	-	137	27	200
Pacific Northwest	133	94	34	510	171	235	396	61	753				2,446
East and Midwest	647	297	129	1,493	390	934	426	53	1,005				5,424
TOTAL OFFS	1,260	581	258	2,984	862	1,782	1,318	401	3,008		4,945	2,690	

1/ Frequency of passenger service - 3 days per week.
2/ Principal destinations from Montana stations to points west are Spokane and Seattle.
3/ Principal destinations from Montana stations to points east are Bismarck, Fargo, Minneapolis-St. Paul and Chicago.

of with the proceeds going to the creditors. Since closing down a railroad company usually causes severe economic ramifications on firms dependent upon rail service, Congress many years ago set up a special process for reorganizing railroads forced into bankruptcy while at the same time continuing essential services. Upon petitioning for bankruptcy under Section 77 of the Federal Bankruptcy Act, the U. S. District Court overseeing the case appointed a Trustee to oversee the reorganization of the Milwaukee on a self-sustaining basis or its liquidation (or some combination of the two courses of action). The process involved is inherently a confrontation between the interests of the creditors, who seek to prevent any further diminuation of their assets, and the shipping public who seek the continuation of essential rail service.

How did the Milwaukee get into this situation? To understand the underlying cause, one must review the history of the Milwaukee's northwest extension. The Milwaukee was the last of the three transcontinental carriers which developed mainline routes through Montana to Washington and Oregon. Consequently, it was not able to select the best routes through the mountains, nor was it a land grant railroad able to obtain extensive properties through legislation to encourage settlement in proximity to the railroad. The Milwaukee never was able to develop on-line traffic comparable to the Northern Pacific or Great Northern (now Burlington Northern). Most of the Milwaukee's Montana traffic either originates on its central Montana branches -- specifically, the grain lines between Harlowton, Lewistown and Great Falls -- or at Deer Lodge, Bonner, Missoula, or Frenchtown (Schilling) on the mainline. Other than for this traffic,

the mainline is largely a conduit for through traffic moving between the midwest and the west coast. In short, the Milwaukee did not generate enough income on its midwest operations to offset the losses being incurred on its northwest extension.

In the summer of 1978, the Trustee, concluding that the northwest extension was inherently unprofitable, announced a plan whereby Milwaukee Lines west of Butte were to be sold to connecting railroads or to be abandoned. The disposition of the remaining lines was to be held in abeyance until completion of financial studies undertaken by Booz, Allen & Hamilton, a well-known management consulting firm, for the Trustee.

In late April, 1979, the Trustee concluded that the cash flow situation had become so severe that rail service had to be discontinued on a majority of the Milwaukee trackage (including lines in Montana west of Miles City) and petitioned the U. S. District Court to approve this course of action. Normally the ICC has exclusive say over line abandonments; unilateral termination of rail service is only done in extremely dire circumstances. On June 1, 1979, the Court denied the partial embargo requested by the Trustee, since it could find no statutory or other authority for granting the requested relief. This was done reluctantly, as the Court felt that the Trustee's proposal would promote the public interest.1/ The court decision was a serious blow to the Trustee's efforts to

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1/ The Court also stated that allowing an embargo could "constitute a de facto abandonment," since the Trustee conceded that he would not be able to reorganize the Milwaukee "if it contains the portions sought to be embargoed."

reorganize the Milwaukee and did nothing to solve the railroad's precarious cash position. Consequently, attorneys for the Trustee have filed an appeal to the Court's decision; the original court decision has subsequently been upheld.

On June 19, 1979, the Trustee received Court approval to apply to the FRA for a loan of $20 million.[1] In approving the loan, the Court ordered the Trustee to immediately "commence proceedings to abandon the Milwaukee's entire system and, to the extent this is not authorized by any Title VIII map not already published, to publish and file such a map as soon as feasible." He further ordered that the Trustee file a plan of reorganization on or before August 6, 1979, "such plan to include reorganization by abandonment and liquidation to the extent deemed advisable or necessary." The Court did not order the Trustee to abandon the entire railroad, but rather to develop and file a reorganization plan which would be the basis for the abandonment of existing routes.

On June 30, 1979, the Milwaukee filed a revised systems diagram map with the ICC showing all lines as subject to an abandonment application within three years. This does not necessarily mean abandonment of the entire Milwaukee system; but rather provides maximum flexibility to the Trustee in deciding which segments are to be eventually included in its core system. It also provides the four month notification required before abandonment applications can be filed with the ICC.

1/ The funds requested are part of the $50 million available through the Emergency Rail Services Act of 1970.

The Milwaukee has also announced its intention to file abandonment applications for all of its lines west of Butte on or about August 8.[1/] These lines have been shown as "subject to abandonment within three years" on its previous systems diagram map filed with the ICC during the summer of 1978. Furthermore, in view of intense publicity surrounding the Trustee's embargo request, the Milwaukee has indicated that it will seek a waiver from the ICC reducing or eliminating the four-month notification requirement before filing abandonment applications for the remaining lines identified in its embargo petition to the U. S. District Court.[2/] Although the ICC can take up to 15 months to rule in abandonment proceedings, the agency has promised expeditious consideration of these applications. Decisions could come before the end of 1979.

The ultimate decision on how the Milwaukee is to be reorganized rests with the U. S. District Court. The Trustee has been directed to submit a plan by August 6. While the specific details of this plan are unknown, it obviously depends heavily on the financial studies conducted for the Trustee by Booz, Allen & Hamilton. The Court is not necessarily bound by this proposal, but can accept all or parts of other plans or proposals from parties recognized by the Court.

[1/] The Milwaukee has issued and published in area newspapers Notices of Intent to File Abandonment Applications for all segments west of Butte.

[2/] The Milwaukee is seeking a waiver of the four month notification requirement, Montana will file a protest with the ICC of this action as providing inadequate notification to shippers dependent upon Milwaukee service.

As an alternative to a "retrenched" Milwaukee system only serving the midwest, considerable interest has been expressed in recent months in employee and shipper ownership of a railroad which would be a true "replacement and successor" to present railroad management. For years, much controversy has centered around the management and financial practices of the Milwaukee and the railroad's basic desire to compete for rail traffic in Montana and other states. These concepts were given a major boost by the petition of the Trustee in requesting an embargo on nearly 7,000 miles of track and the aggressive action of the State's Congressional delegation in seeking emergency funding for continuing rail service on the Milwaukee and in promoting U. S. Department of Transportation study and development of an employee and shipper ownership plan for the railroad. Both Montana Senators were active participants in the Court proceedings. However, the Court clearly indicated that solutions for continuing the Milwaukee had to be found at the governmental level. For some time, the Chairman of the Senate Finance Committee has been deeply interested in employee-owned corporate structures; the Montana delegation was able to convince the Chairman of the practicability of such ownership for a railroad and obtain a commitment of support in seeking necessary federal start-up and rehabilitation funding, provided that the firm commitment of regional shippers and railroad employees could be demonstrated.

This development spurred action at the state level. A prospectus was developed for a "New Milwaukee Organization" to serve as a mechanism for putting together a new railroad corporation having the objective of ensuing continued, competitive rail service in

regions currently served by the bankrupt Milwaukee. Specifically, the Organization was assigned the following functions:

(1) Develop a specific organizational, financial, management and marketing plan for a shipper and employee owned railroad company which would provide railroad service either from Minneapolis west to Seattle, or over the entire present Milwaukee system.

(2) Intervene in the Milwaukee Road Bankruptcy proceedings to protect the interests of the Organization.

(3) Intervene in Milwaukee Reorganization proceedings before the Interstate Commerce Commission to protect the interests of the Organization;

(4) Negotiate with the Milwaukee Bankruptcy Trustee for acquisition of railroad assets;

(5) Interact with members of Congress and with federal agencies to develop legislation necessary for the new railroad company's operation, to obtain needed studies and technical assistance, to obtain loans and other necessary financial assistance for the new railroad, and to otherwise gain positive intervention on various Milwaukee-related proceedings;

(6) Interact with state and local officials to coordinate with state rail plans to insure compliance with applicable state laws and local ordinances, to investigate potential state sponsored financing, and to gain intervention on Milwaukee-related proceedings;

(7) Develop the corporate structure for the new railroad company, and make necessary filings before the Interstate Commerce Commission and the Securities and Exchange Commission;

(8) Establish an identity for the new railroad reflecting a more progressive modern and responsive image than that currently existing for the Milwaukee Road;

(9) Stimulate and coordinate various additional related studies by various university-based, public, and/or private research organizations, and to gain appropriate intervention in Milwaukee-related proceedings.

Funding for the expected six month life of the New Milwaukee Organization is anticipated to come from the Old West and Pacific Northwest Regional Commissions ($200,000 each), rail employee

organizations ($300,000), Milwaukee shippers ($300,000), and Federal technical assistance grants ($300,000). The various groups have already been asked to participate; to date, a portion of the $1.3 million in funds has been raised. Efforts are currently underway to appoint a Board of Directors and to hire an administrator and appropriate technical staff and consultants to undertake the required technical, legal, and organizational work.[1]

At this point, Montana supports the New Milwaukee Organization in its efforts to create an employee and shipper owned railroad replacing the bankrupt Milwaukee in the northwest.

A somewhat different approach has simultaneously been taken by the State of South Dakota as a consequence of the embargo petition. Recognizing the severity of the economic impacts upon electric power consumers and agricultural interests in that state, the South Dakota Department of Transportation proposed a formal agreement in which the agency pledged $2.3 million to the Milwaukee for the purpose of funding the immediate rehabilitation of the Miles City to Jonathan, MN mainline trackage.[2]

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[1] The Board is proposed to consist of 15 members, of which 9 would be appointed by the Governors of the affected states, 3 chosen by Milwaukee employees, and 3 chosen by Milwaukee shippers.

[2] Most of the local traffic on the Milwaukee main line is a unit coal train originating at Gascoyne, ND, and destined to the Big Stone and Ortonville Power Plants located near the South Dakota - Minnesota state line. Local service is also provided to grain elevators located along this line. In addition, the Milwaukee presently handles "Columbia One" alternately with the Burlington Northern. This is a unit coal train originating in the southern Montana coal fields and destined for Wisconsin. Presumably, the Milwaukee will seek to retain this coal traffic, if the Jonathan - Miles City line is retained. If the line was abandoned, South Dakota stands to lose 48 percent of its rail system, including its connections to the west. These connections may become of increasing importance should the marketing of grain shift to the west coast.

While South Dakota is prepared to proceed with this project, it has sought to broaden the sponsorship of what is essentially a regional project by including the other states benefiting from retention of this segment of the Milwaukee mainline (i.e., Minnesota, North Dakota, and Montana). Specifically, South Dakota has proposed that each of the four states utilize a portion of each state's Title VIII entitlement to provide the federal share of the $2.3 million "immediate" rehabilitation project, with the shippers providing the required matching funds. South Dakota further proposed proportioning costs based on the expected increase in the cost of power times that state's share of the combined consumption base. Under this proposal, South Dakota, North Dakota, Minnesota, and Montana would each be assessed 27, 44, 20 and 9 percent of the federal portion of project costs, respectively.1/ Since then, several alternate methods for apportioning costs have been proposed, each having the effect of increasing Montana's assessment.2/ No decision has been reached on how costs would be shared for this project among the participating states, although an early decision is requisite so that necessary Title VIII funds can be obtained to permit accomplishment of the rehabilitation work in 1979.

The purpose of the $2.3 million immediate rehabilitation project is to counter the effects of an extended period of deferred maintenance. The project provides for the replacement of 70 thousand cross ties between Big Stone City, South Dakota, and Marmarth, North

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1/ Under this proposal, Montana's share should be approximately $125 thousand.

2/ Under the alternate proposal, Montana's share could range as high as $448 thousand.

Dakota, and the addition of 15,000 tons of ballast. This is the maximum effort which can be accomplished in the time available before winter. Without this project, a further reduction in speeds may be necessary which would jeopardize the one-day turnaround presently being provided by the Milwaukee for the unit coal train. South Dakota will administer this project on behalf of the other three states.

The $2.3 million project is only a temporary solution; full rehabilitation necessitates the expenditure of an additional $22.7 million over a three to four year period to replace 569 thousand cross ties and 3.2 miles of rail at Aberdeen, South Dakota, plus 300 miles of re-ballasting. The object is to upgrade the track so that 50 mph speeds can be maintained over the entire length of the line under normal conditions. Funding for this latter project will be sought under the low interest loan provisions of Section 505 of the 4R Act. The Milwaukee will apply for and be responsible for the repayment of these funds. South Dakota will form a Regional Rail Authority, as authorized under existing legislation, to co-sign as a guarantor for the Milwaukee on the funds borrowed for this long-term rehabilitation, thereby providing indemnification of the loan in case of default. In the event the Milwaukee does not survive, the Regional Rail Authority would structurally and financially assume ownership of the line and would then either operate the line directly or lease it to another carrier.

At this point, Montana has not elected to join with South Dakota in rehabilitating the track to continue rail service on the Milwaukee's mainline between Jonathan, MN and Miles City.

Irrespective of the decisions reached by the other states, South Dakota is prepared to "go-it-alone" on this project, thus retaining Milwaukee service as far west as Miles City. Another somewhat remote possibility would be to accept the concept being utilized by South Dakota, extending the mainline to Butte or further west , instead of ending the project at Miles City. Such a concept would (1) provide a connection with the Union Pacific at Butte in addition to the connection with the Burlington Northern at Miles City, thus retaining some degree of intramodal competition on shipments to the west coast for traffic originating east of Miles City; (2) allow for the retention as a single entity of the Milwaukee branch line serving Moore, Lewistown, Denton, Geraldine, Highwood, Great Falls and Fairfield, a rather profitable grain line; (3) provide access to potential coal deposits in the Roundup area; and (4) provide continuing service to a number of shippers dependent upon continued rail service.1/

Under this concept, the objective is to provide local rail service, rather than to be a part of a reconstituted transcontinental route. This concept could be further extended to Schilling or a terminus in Idaho or Washington which would then allow for continued rail service to major traffic generators at Bonner, Missoula and Schilling.2/ An extended line could be operated by the Milwaukee, if agreed to by the Trustee and the U. S. District Court overseeing the

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1/ Including the White Sulphur Springs and Yellowstone Park Railway, which would be isolated were the Milwaukee mainline abandoned.

2/ Deer Lodge, Missoula and Schilling are also served by the Burlington Northern. A better solution would be to consolidate facilities and services, rather than retain duplicate trackage.

reorganization, or another carrier provided that arrangements can be made to purchase the required Milwaukee trackage.[1]

All three alternatives to the reorganization plan being developed by the Trustee seek, in varying degrees, (1) some partial alternative to anticipated, near total Burlington Northern domination of the rail freight business in the northwest, (2) retention of rail service at critical points not served by another carrier, and (3) the preservation of jobs. If either the New Milwaukee Organization or an "extended" South Dakota proposal fail to gain widespread public support or acceptance by the U. S. District Court overseeing the Milwaukee reorganization, then the near total loss of competitive rail service in Montana becomes inevitable. Each of the alternatives presented has a different degree of risk associated with it. Also a factor is timing -- (1) whether the New Milwaukee Organization receives the governmental support and financial commitment, within the next month or two, necessary to demonstrate the ability to "pull it off," (2) the desire of South Dakota to proceed ahead with rehabilitating the Milwaukee mainline between Jonathan and Miles City during the 1979 construction season, and (3), the mandate of the U. S. District Court upon the Trustee to proceed rapidly with reorganization, including the abandonment of those lines not included within the restructured system. There is also a strong possibility that many of the more profitable segments of the Milwaukee system may be sold to connecting carriers; whether the more viable sections are transferred depends upon the resulting price.[2]

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[1] A shortline operator would also be a possibility.

[2] Generally, these segments would only include the major traffic generating points and whatever trackage is necessary to connect the segment with acquiring carriers' existing rail lines.

While such negotiations have been in progress for some time, no agreements have yet been reached or announced. This could occur with the issuance of the Trustee's reorganization plan expected on or before August 6. ICC approval is required of such transfers, however.

What happens if the Burlington Northern becomes the dominant carrier in Montana? Is this necessarily bad? No, but it does have the effect of reducing the leverage that the state government and shippers have in rate and service matters. Shippers consequently must rely on intermodal competition to keep service and price within reason. It is important to recognize that competitive rail service only exists today within or between a relatively few areas in Montana. Some of the major Milwaukee shippers are also Burlington Northern shippers. In these cases, the choice of railroad (and the somewhat lower Milwaukee tariffs for some movements) will be lost, although rail access remains. In other cases, the Burlington Northern or Union Pacific may simply be the replacement carrier.

Is there any other possibility should the alternatives presented earlier fall by the wayside? One promising "substitute service" type concept, applicable particularly to the grain lines in central Montana, would be to construct a grain subterminal in the general Lewistown area allowing the use of unit grain trains. Grain shipments presently made by rail from grain public warehouses located along the Milwaukee (and other lines) would instead be trucked to the centralized facility where it would be loaded into 100-ton hoppers. Shipments would be made in 50-car units, rather than by single cars as at present. Such a subterminal could eventually

permit the retirement of many light density lines in central Montana. The chief virtue of the grain subterminal concept is that it introduces major economies of scale which would be reflected in better utilization of the car fleet (probably dedicated equipment) and more reliable service (use of unit trains) eliminating the local service and switching operations presently taking place (enroute). It is a concept which is not now in existence anywhere in Montana, although is quite common in the midwest. Its practicality rests on (1) being able to pass along significant economic benefits (transport cost savings) to the farmers, grain elevator operators, and railroads, (2) a willingness on the part of grain warehouses to combine together their shipping requirements into unit train quantities bound for a single destination, while retaining their independence and competitiveness in all other areas, and (3) the availability of capital funds to construct a strategically located grain subterminal and make necessary improvements to the highway system to sustain the "collector" trucking required in support of the terminal. This concept is the only long-term, technologically advanced solution possible today. It does require a throughput of at least 100 thousand tons per year, with five thousand ton shipments to single destinations.

Neither the Department of Agriculture nor the Department of Highways have had sufficient time to thoroughly investigate the grain subterminal concept -- to perform the microeconomic and transport system analyses necessary to establish whether the concept is economically viable for application in central Montana. Equally important are the institutional aspects -- the need to work closely

with farmers/farm organizations, grain public warehouse operators, trucking interests, local officials, and railroad personnel to solve the myriad of concerns, problems and complications arising from such drastic change. Thus, both agencies should proceed forward with this study to determine whether this concept would provide some of the benefits normally associated with competitive rail service, and thus represents a viable alternative which could be implemented in lieu of the continuation of conventional rail service.

It is within this framework of great uncertainty that the Montana Rail Plan has been developed.

III. CLASSIFICATION OF LINES

Federal regulations require states to:[1]

> "Identify the following classes of rail service within the State providing both a written description and illustration of each category of service on appropriate scale maps:
>
> (i) Lines over which oversized loads (high and wide loads) or excessively heavy loads are normally routed due to dimension or weight restrictions on alternate routes;
> (ii) Rail freight routes to military installations;
> (iii) Rail lines in the State which are eligible for assistance under section 5(k) of the Act;
> (iv) Lines of railroad in the State which are identified as potentially subject to abandonment as well as those which are anticipated to be the subject of an abandonment as well as those which are anticipated to be the subject of an abandonment or discontinuance application within 3 years following the date on which the system diagram map is submitted by a railroad pursuant to section 1a(5)(a) of the ICA and 49 CFR 1121.20(b)(1) and(2);[2]
> (v) Rail freight services in the State for which abandonment applications are pending before the Commission;
> (vi) Projects for which a State plans to apply for rail service continuation assistance, including where practicable, projects not yet eligible during the ensuing year (all projects listed shall be from among those listed in paragraphs (c)(3)(iii, (iv), and (v) of this section); and
> (vii) Rail projects for which a state provides or plans to provide assistance from sources other than the Section 5 Program, including the estimated cost of each such project."

A. Lines Having Dimension or Weight Restrictions

Figure 10 identifies lines over which oversized loads (often referred to as high and wide loads) or excessively heavy loads can be routed to avoid dimension and weight restrictions on alternate routes. Cars in unrestricted interchange service must (1) have a maximum width of 10 feet 8 inches provided that the truck centers

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[1] 49 CFR Part 266.15(c)(3).

[2] Section 1a(5)(a) of the ICA (Interstate Commerce Act) pertains to the submission and publication of system diagram maps by rail carriers. 49 CFR 1121.20 presents ICC rules and regulations pertaining to system diagram maps.

do not exceed 41 feet 3 inches, (2) not exceed 15 feet 1 inch in height, and (3) not have a loaded axle weight greater than 65,750 lbs.[1/] Cars in limited interchange range in height up to 17 feet. Thus, routes having a controlling horizontal clearance of 12 feet and a controlling vertical clearance of 18 feet or greater are generally suitable for high and wide loads. Similarly, routes having a rail load limit of 315,000 lbs. per car are generally suitable for excessively heavy loads.

The Burlington Northern Class A mainlines meet the above dimensional and excessive weight criteria, as do several other Burlington Northern lines. The Milwaukee mainline meets the above criteria only east of Harlowton. In addition, a number of the branchlines have weight restrictions considerably below the 263,000 lbs. allowed in unrestricted interchange. This information is summarized in Figure 10.

B. Rail Freight Services to Military Installations

The Military Traffic Management Command is responsible for handling land transportation for the U. S. Department of Defense. Within this organization, the "Railroads for National Defense" (RND) project group was set up in 1975 to integrate national defense railroad needs with the programs of the FRA, the states, the AAR, and individual railroads. RND has investigated the flow of peacetime shipments through analysis of government bills of lading broken down by installation and state. Montana was not one of the more important states in terms of originating and terminating carloads. The carload data was then assigned to probable routings. Figure 11 illustrates

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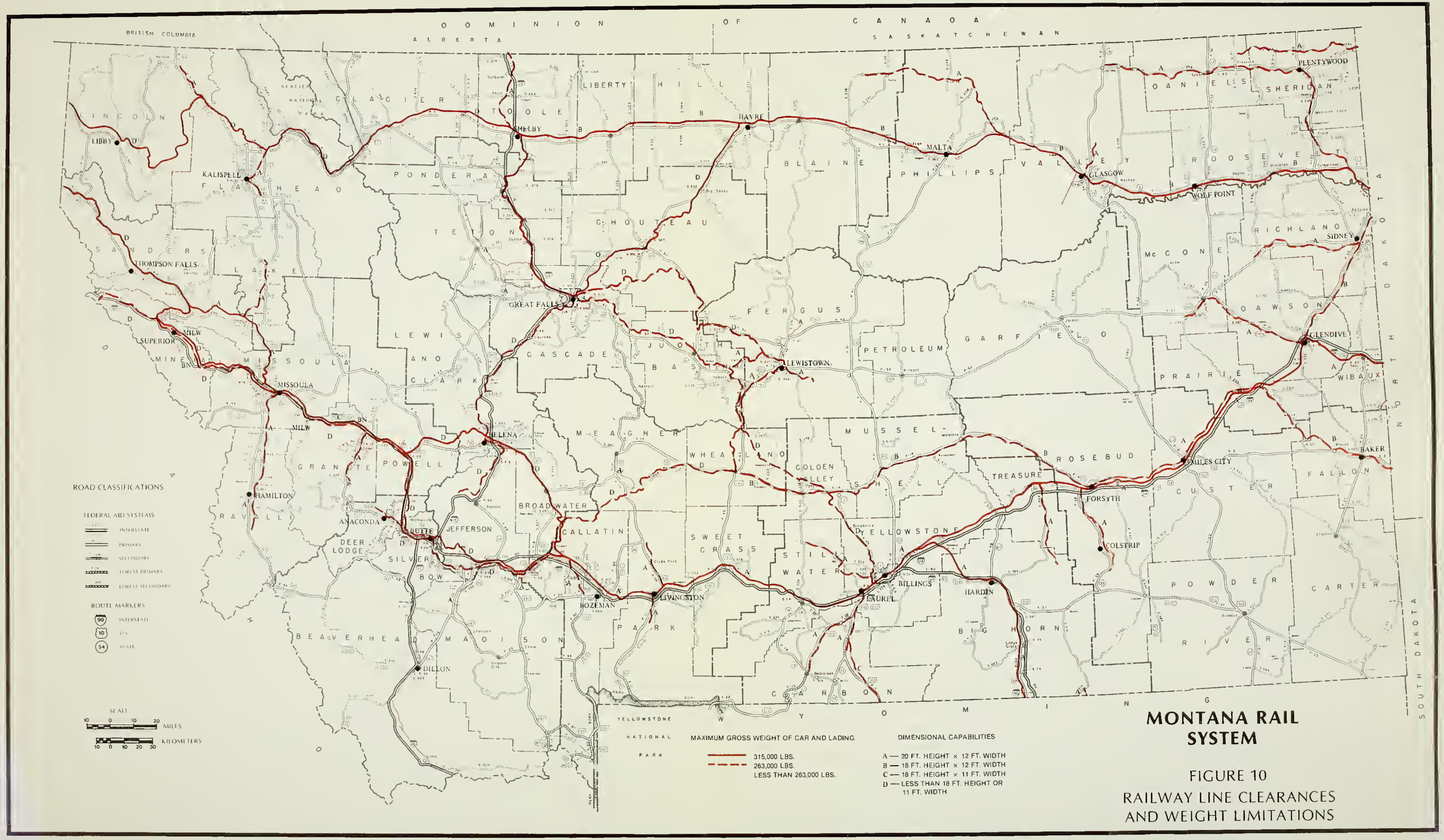
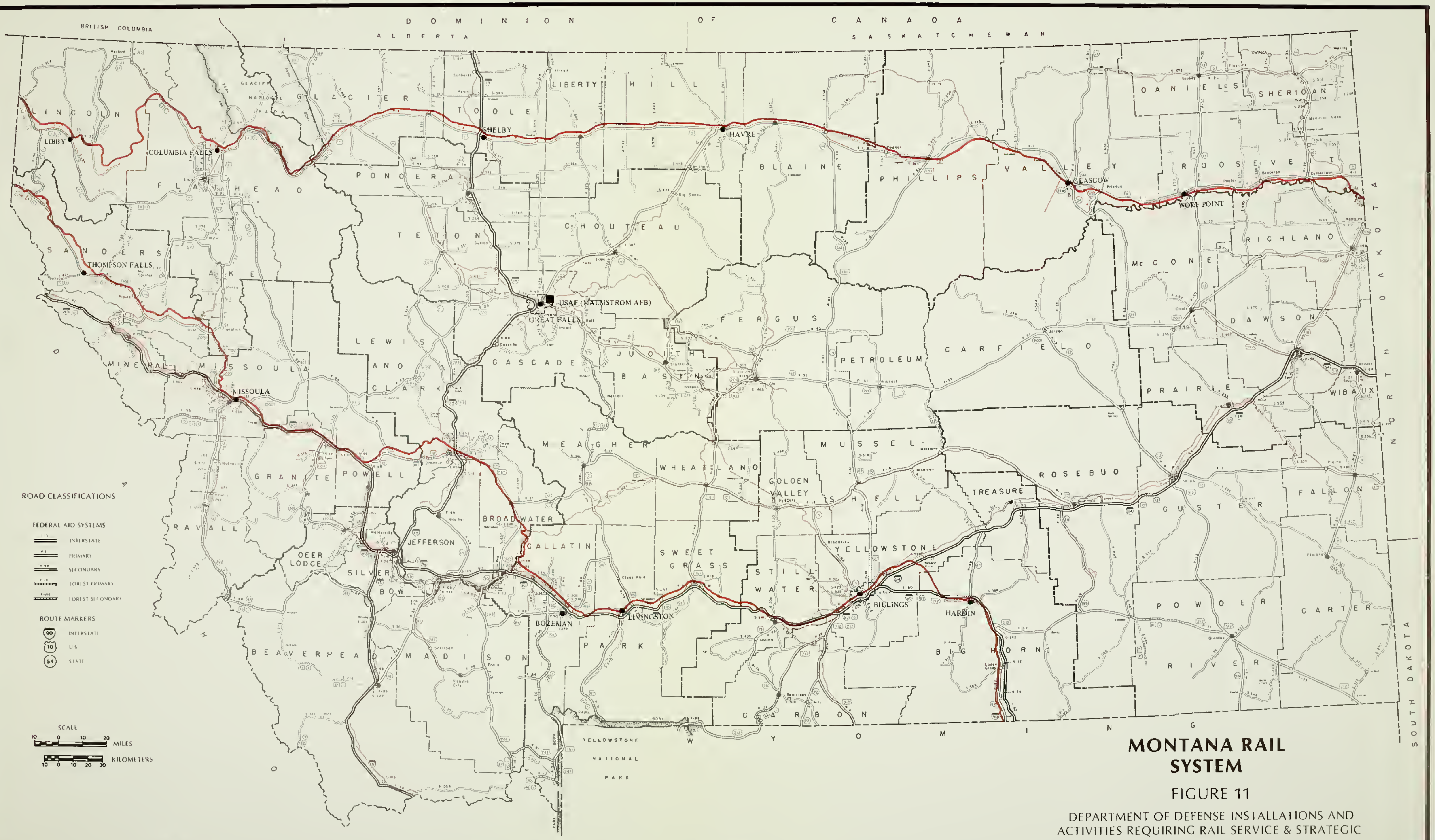
[1/] Maximum car widths for cars having truck centers greater than 41 feet 3 inches must be less to compensate for end and center swingout.



MONTANA RAIL SYSTEM

FIGURE 10
RAILWAY LINE CLEARANCES
AND WEIGHT LIMITATIONS



MONTANA RAIL SYSTEM

FIGURE 11

DEPARTMENT OF DEFENSE INSTALLATIONS AND ACTIVITIES REQUIRING RAIL SERVICE & STRATEGIC RAIL CORRIDOR NETWORK (STRACNET)

lines serving military installations.

The data collected were then used by RND to identify "a network of rail corridors strategically important to the defense of the United States". Criteria used in identifying the "STRACNET" network included (1) present peacetime and anticipated mobilization movements, (2) clearances, (3) interconnectivity, (4) embarkation points, and (5) compatibility with FRA classification. The resulting STRACNET corridors total 30,000 miles nationwide. Corridors within Montana include the Burlington Northern Hi-line (northern) line, the portion of the southern east-west line west of Billings, and the line to Lincoln, Nebraska.

C. Rail Lines Eligible for Assistance

Railroads must obtain Interstate Commerce Commission approval to abandon light density lines.[1] Since passage of the Railroad Revitalization and Regulatory Reform Act of 1976, the Commission has issued certificates of public convenience and necessity permitting the abandonment of the following rail lines in Montana:

Line [2]		Termini	Length (miles)	Date of Abandonment
MILW	MD 7th Sub	Bozeman-Menard	22.3	1975
BN	YD	Billings-Shepard	14.3	1976

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[1] Section 1a(1) of the Interstate Commerce Act, as amended by Section 802 of the Railroad Revitalization and Regulatory Reform Act of 1976, reads as follows: "No carrier by railroad subject to this part shall abandon all or any portion of any of its lines of railroad (hereinafter in this section referred to as 'abandonment') and no carrier shall discontinue the operations of all rail service over all or any portion of any such line (hereinafter referred to as 'discontinuance'), unless such abandonment or discontinuance is described in and covered by a certificate which is issued by the Commission and which declares that the present or future public convenience and necessity require or permit such abandonment or discontinuance. . . ."

[2] MD - Montana Division (BN and MILW), YD - Yellowstone Division (BN only)

Line	Termini	Length (miles)	Date of Abandonment
MILW MD 11th Sub	Heath-Grass Range	26.2	1976
BN MD 8th Sub	Draycut Jct.-Augusta	36.7	1977
MILW MD 6th Sub	Bonner-Clearwater	36.4	1978
MILW MD 7th Sub	Three Forks-Bozeman	38.4	1978
MILW MD 8th Sub	Bozeman Hot Springs-Gallatin Gateway	4.8	1978
UP Yellowstone Br	Ashton, ID-West Yellowstone	55.2[1/]	1979

Under the recently amended abandonment process, when the Commission makes a finding that the public convenience and necessity permit the abandonment or discontinuance of service on a railroad line, it is required to publish the finding in the Federal Register. If within 30 days, the Commission finds that a responsible person (including a governmental entity) has offered financial assistance which would likely cover (1) the difference between the revenues attributable to the line and the avoidable cost of providing rail freight service plus a reasonable return on the value of the line, or (2) the acquisition cost of all or a portion of the line, then the Commission is required to postpone the issuance of an effective certificate authorizing abandonment or discontinuance for a reasonable period of time (not to exceed six months) to permit the carrier and the responsible person to reach an appropriate financial agreement covering subsidization or sale of the light density line. Upon notification of the execution of such an agreement, the Commission will then postpone the issuance of a final and effective certificate for the length of the agreement, including any extensions of modifications. The above does not change the basic abandonment process since the Commission must first decide whether to permit abandonment or not. It does allow for an accommodation to be worked out between the

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1/ 9.5 miles in Montana

carrier and those individuals or firms dependent upon continued rail service, with financial assistance from the state.

No individual or governmental entity has sought to subsidize or acquire the lines listed above within the prescribed time period or anytime thereafter. Thus, final certificates have been issued by the Commission. In most cases, the railroad has removed the track and may have sold all or part of the right-of-way.[1] Thus, while the above listed lines are technically eligible for assistance, no post-abandonment efforts have been made to keep these lines in operation through an operating agreement with the owning railroad.[2]

D. Rail Lines Potentially Subject to Abandonment

In addition to lines already abandoned, Figure 12 shows rail lines potentially subject to abandonment. These include lines which the carrier (1) anticipates filing an abandonment application within three years of the date of the latest system diagram map, and (2) has under study and which may be the subject of a future abandonment application. The light density lines potentially subject to abandonment (as of July, 1979) are listed on the following page.

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[1] In many cases, the land reverts back to the previous ownership since the right-of-way was originally acquired through easement rather than outright acquisition.

[2] This assumes that the tracks are still in place and that the owning railroad is willing to provide subsidized service even though not required to do so by 49 CFR. Assistance is also dependent upon preparation and adoption of a State Rail Plan and subsequent approval by the Federal Railroad Administration.

Line[1]	Termini	Length (miles)
MILW DD 44th Sub[2]	South Dakota Line-Miles City	114.7
MILW MD 1st Sub.	Miles City-Harlowton	216.7
MILW MD 2nd Sub.	Harlowton-Three Forks	113.9
MILW MD 3rd Sub.	Three Forks-Deer Lodge	112.1
MILW MD 4th Sub.	Deer Lodge-Alberton	110.8
MILW MD 5th Sub.	Alberton-Idaho Line	77.5
MILW MD 10th Sub.	Harlowton-Lewistown Yard	61.3
MILW MD 11th Sub.	Lewistown Yard-Heath	9.2
MILW MD 13th Sub.	Lewistown Yard-Falls Yard	134.5
MILW MD 14th Sub.	Falls Yard-Fairfield	38.5
BN MD 5th Sub.	Moccasin-Lewistown	30.7
BN MD 7th Sub.	Hogeland-Saco	79.3
BN MD 1st Sub. Ind. Track	Glasgow-Glasgow AFB	18.8
BN YD 6th Sub.	Beach, ND-Carlyle	20.8[3]

E. Rail Lines for which Abandonment Applications are Pending

Figure 12 also shows rail lines for which abandonment applications are pending before the Commission. As of July, 1979, the lines affected are as follows:

Line[4]	Termini	Length (miles)
MILW MD 14th Sub.	Fairfield-Agawam	31.1
MILW MD 12th Sub.	Winifred Jct.-Winifred	42.7
BN RMD 9th Sub.	Red Lodge-Silesia	34.5
MILW MD 2nd Sub.	Ringling-Dorsey	3.5
BN RMD 13th Sub.	Haugan-Mullan ID	29.3[5]

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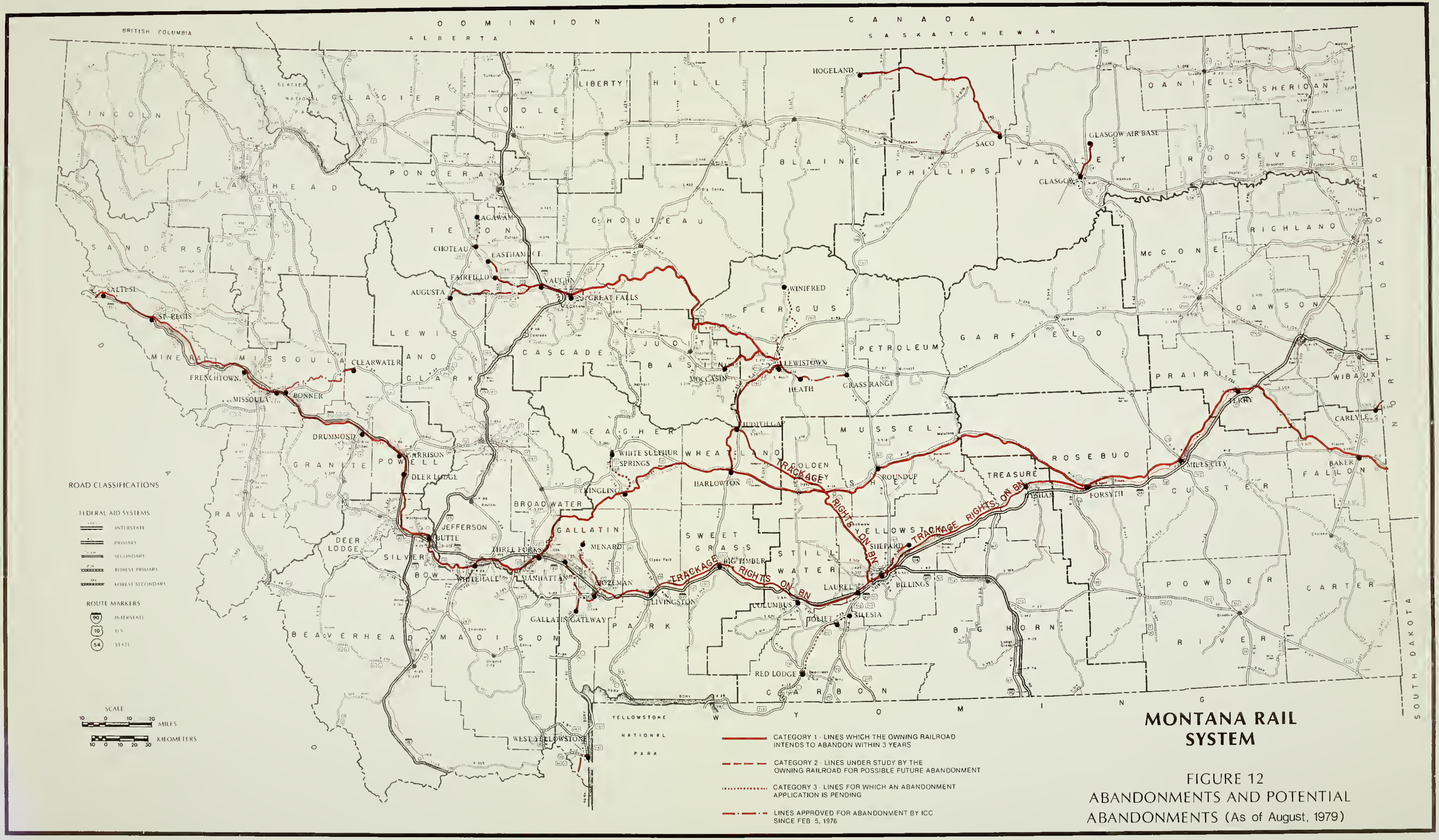
[1] DD-Dakota Division (MILW only), MD-Montana Division (BN and MILW), RMD-Rocky Mountain Division (BN only), YD-Yellowstone Division (BN only).

[2] Recently, the Trustee has announced his intention to retain the Milwaukee as far west as Miles City, Montana. However, the current ICC System Diagram Map shows all Milwaukee lines in Montana as either potentially subject to abandonment or lines for which abandonment applications are pending.

[3] Only 2.9 miles in Montana.

[4] MD-Montana Division (BN and MILW), RMD-Rocky Mountain Division (BN only)

[5] 18.9 miles in Montana.



MONTANA RAIL SYSTEM

FIGURE 12
ABANDONMENTS AND POTENTIAL ABANDONMENTS (As of August, 1979)

F. Projects for which the State Provides or Plans to Provide Assistance from Sources Other Than the Section 5 Program

In some states, the total amount of federal rail service continuation assistance available to the state is insufficient to meet perceived needs. In a few cases, states have or are using funds from non-federal sources to continue rail service on lines which otherwise would be abandoned.

At the present time, there are no projects for which the Montana Department of Highways either provides or plans to provide assistance from sources other than the Section 5 program.

IV. INDIVIDUAL LIGHT DENSITY LINE ASSESSMENTS

The purpose of this chapter is to introduce and explain the individual light density line assessments which have been completed by the MDH and appear in Technical Appendix A. The placement of the individual assessments in a separate appendix was done because of the large amount of data and text necessary in providing a complete appraisal of the line and in explaining the resulting assessment. Thus, Chapter IV serves as a guide to permit the reader to better appreciate and understand the conclusions which have been reached by the MDH on individual light density lines.

A. <u>Lines for which Assessments were Prepared</u>

Detailed individual light density line assessments were completed for lines which are now or are likely to become eligible for local rail service assistance within the next several years. Criteria used in line selection included:

FRA Class B Branchlines (gross tonnages of one million tons or less per year).

ICC System Diagram Map categories 1, 2 and 3.[1]

Category 1 - lines for which the carrier anticipates filing an abandonment application within three years of the date of the System Diagram Map.

Category 2 - lines which the carrier has under study which may be the subject of a future abandonment application on account of either anticipated operating losses or excessive rehabilitation costs as compared to potential revenues.

Category 3 - lines for which an abandonment application has been filed with the ICC.

Other lines of Class II railroads which may be the subject of a future abandonment application.

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[1] 49 CFR Part 1121.20(b).

Table 7 shows the lines in Montana which meet the above criteria and for which detailed assessments have been prepared.

B. Format Used

The format used for individual branchline assessments meet FRA format and content requirements for individual light density line assessments.[1] These requirements are quoted below:

> "Contain with respect to each line or project listed under subdivisions (3)(iii), (iv) and (v) of this paragraph: (i) freight traffic and characteristics of shippers on the line of railroad; (ii) revenues derived from rail freight services on each line and the cost of providing these services; (iii) a discussion of the condition of the rail plant, equipment and facilities; (iv) an economic and operational analysis of present and future freight service needs; (v) an analysis of the effects of abandonment with respect to the transportation needs of the State; (vi) the relative economic, social, environmental, and energy costs and benefits involved in the use of alternative rail services or alternate modes, including costs resulting from lost jobs, energy shortages, and the degradation of the environment; (vii) an evaluation of methods of achieving economies in the cost of rail service operations on lines on which service will be continued including consolidation, pooling, and joint use or operation of lines, facilities, and operating equipment; (viii) the competitive and other effects on or by profitable railroads; (ix) for lines or projects which the State may consider for rail banking, a description of future economic potential such as development of fossil fuel reserves or agricultural production; (x) a statement of the State's projected future for the line or project upon the expiration of Federal assistance under Section 5 of the Act (including such considerations as profitability; State or shipper subsidy; State, shipper, or carrier acquisition; termination of rail service; and the substitution of other transportation); (xi) a detailed description of alternatives evaluated, including subsidy and discontinuance or abandonment of service and potential for moving freight by alternate rail service or alternate modes, an explanation of the analysis of each alternative, including the criteria considered in selecting or rejecting the proposed line or project for assistance and identification of the relative costs and benefits of each alternative; (xii) the conclusion of the State as to whether or not the line or project should be selected for Federal or State assistance; and (xiii) a discussion of how each line or project selected for assistance is related to the criteria established as part of the overall State rail planning process."

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[1] 49 CFR Part 266.15(c)(4).

TABLE 7

LIGHT DENSITY LINES FOR WHICH DETAILED ASSESSMENTS HAVE BEEN COMPLETED

	Line1/	Between (Termini)	ICC Category 2/	Length (mi.)
1.	MILW MD - 14th Sub.	Agawam-Great Falls	1, 3	69.6
2.	MILW MD - 13th Sub.	Great Falls-Lewistown	1	134.5
3.	MILW MD - 10th Sub.	Lewistown-Harlowton	1	61.0
4.	MILW MD - 12th Sub.	Lewistown-Winifred	3	42.7
5.	MILW MD - 11th Sub.	Lewistown- Heath	1	9.2
6.	BN MD -5th Sub.	Moccasin-Lewistown	1	30.7
7.	BN MD -7th Sub.	Hogeland-Saco	1	79.3
8.	BN RMD - 9th Sub.	Red Lodge-Silesia	3	34.5
9.	MILW MD -2nd Sub.	Ringling-Dorsey3/	3	22.8
10.	BN MD - 1st Sub. Ind. Track	Glasgow-Glasgow AFB	1	18.8
11.	BN RMD - 13th Sub.4/	Haugan-Mullan ID Mullan, ID-Wallace, ID5/	3 3	29.5 9.5

1/ MD - Montana Division (BN and MILW), RMD - Rocky Mountain Division (BN only)

2/ 1-Subject to abandonment within three years; 2-under study for possible future abandonment; 3-abandonment application pending.

3/ 3.5 miles owned by the Milwaukee, the remainder by the White Sulphur Springs and Yellowstone Park Railroad. (WSPYPR leases portion owned by MILW, for which an abandonment app. has been filed)

4/ Detailed assessment originally prepared by RCAI for the Idaho Transportation Department

5/ Discontinue BN service only. Line to be transferred to the UP

The regulations further require that "State submissions under this section shall reasonably conform to the format of this section, and each item submitted in response to a requirement of this section shall reference such requirement by subsection, paragraph and sub-paragraph."[1] While the prescribed format does occasionally create situations where the "cart gets before the horse", it has been used as the basis for preparing the individual line assessments which appear later in Technical Appendix A. Each of the 13 component sections is now discussed in greater detail:

1. Freight Traffic and Characteristics of Shippers

Includes a description of the number and type of business of the rail-oriented firms (those using rail service in 1977) located along the light density line. Wherever possible, the reasons underlying the decline in traffic are explained along with the long-term ramifications of the modal shifts underway.

Most assessments also contain a table identifying the traffic using the line in 1978.[2] Column headings are defined below:

Commodity Type - Description of the product originated or terminated on the line along with an identification of whether the traffic was inbound or outbound. Standard Transportation Commodity Codes (STCC) have not been used in these assessments, although they provide the basis for commodity indentification in railroad accounting systems.

Carloads - The number of freight cars (of all types) by commodity type.

Tons - Cumulative tonnage (net) by commodity type.

The traffic table was either developed from information supplied by the railroad (abandonment applications) or from shipper survey data. Also shown is the corresponding traffic from the shippers' survey or railroad records, where available. Occasionally, substantial differences were observed between the shippers' survey and railroad traffic reports. Often it is difficult to determine which estimate is more likely to be correct. Railroads have long had a problem in correctly assigning traffic to its actual origination and termination

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[1] 49 CFR Part 266.15(b).

[2] In several cases, 1976 and 1977 traffic volumes are also included as being more representative of typical traffic volumes than those reported in 1978.

stations. On the other hand, there is always the possibility of respondent error when providing traffic information to the State. In general, railroad supplied traffic information was used in preference to shipper survey data.

Other characteristics of the line itself and the rail-dependent shippers are summarized on Worksheet I (unpublished) information supplied separately to the MDH).

2. Revenue and Costs of Rail Service

The revenue and cost estimates were largely developed from railroad branchline account data either supplied directly by the railroads or through abandonment applications. In some cases, adjustments were necessary to expand the data to cover an entire year. The estimates giving attributable revenues and avoidable costs for continuing rail service assume the continuation of present traffic, rail service and operating conditions. It purposely does not include rehabilitation costs.

Row entries include the following (projected 1978):

Freight Originated and/ or Terminated On-Branch	- Self-explanatory.
Bridge Traffic	- Through traffic not originating or terminating on-branch.
Demurrage	- Charges assessed for longer-than-normal retention of cars for loading or unloading purposes.
Passenger	- Revenues from passenger service over branch.
Total Revenues	- Sum of preceding. Represents attributable revenues.
Total Off-Branch Costs	- Sum of terminal, car-mile, and ton-mile costs for single and interline traffic.
Maintenance of Way	- Railroad expenditures to maintain track and structures. Obtained from railroad branchline account records and shows actual expenditures during the most recent full year.

1/ Definitions of attributable revenues and avoidable costs can be found in 49 CFR Parts 1121.41 and 1121.42.

Maintenance of Equipment	- Repairs and depreciation on locomotives and freight cars.
Traffic	- Any expenditure on traffic solicitations attributable to the branchline.
Transportation	- Train crew salaries and other transportation-related expenses.
Miscellaneous	- Self-explanatory. Also includes employee fringe benefits.
Taxes	- Property taxes (order-of-magnitude estimate).
Rent Income/Costs	- Receipts or expenditures from/for rentals.
Bridge Traffic Rerouting	- Net additional cost incurred from the rerouting of bridge traffic.
Total Avoidable Costs	- Sum of total off-branch and on-branch costs.

Valuation of Property[1]	- Sum of (1) allowable working capital computed at 15 days on-branch cash avoidable costs, (2) current income tax benefits resulting from abandonment of line, and (3) the net liquidation benefits (for the highest and best non-rail use) of the line under study or proposed for abandonment.
Rate of Return[2]	- The current cost of capital after adjustment for the effects of current Federal and State income taxes expressed as a percent.
Total Return on Value	- The product of the value or property times the rate of return.

Estimated Subsidy	- Total estimated revenues less total avoidable costs and total return on value indicate the general profitability of the line (the amount by which costs exceed revenues for a given year). Expressed both with and without return on value.

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[1] 49 CFR Part 1121.43 (11/4/76).

[2] 49 CFR Part 1121.44 (11/4/76).

3. Condition of Plant, Equipment and Facilities

Physical inspections and rehabilitation cost estimates have been prepared for five of the ten branchlines in Montana. (No inspection or repair/replacement estimates have been prepared for equipment or facilities, since it is not unique to the branchlines.)

The physical inspections were made by Railway Technical Services, Inc. personnel for MDH. The procedure consisted of detailed quantitative inspections of track structure at ten-mile (or less) intervals and at both ends of the segment, supplemented by qualitative spot checks at five-mile intervals to verify the consistency of conditions at the previous sites. Quantitative data samples on turnouts and road crossings were taken at discretionary locations sufficient to obtain representative results. Descriptive notes were taken on conditions observed. Photographs (35 mm photos) were also taken of the track structure, turnouts, and crossings inspected.

The track structure sample itself consisted of traversing a distance of two hundred ties, noting all ties needing replacement. Track gauge and cross-level readings were taken at six points. Missing and loose bolts, ineffective or missing spikes and tie plates, and broken joint bars were counted. Rail weight and lengths were noted. Qualitative evaluations were made of rail wear, alignment, ballast, slope and ditch conditions, and vegetation. Similar data were recorded at turnouts. Crossing data also included length, width, material and condition of the crossing itself and gauge, shoulder, and ballast section conditions of the track structure at the crossing.

Information available on the five lines inspected includes the following:[1/]

Track Structure

Mile Post	Location of sample where data was taken.
Rail Weight	Given in pounds per yard.
Rail Wear	Graded as light, medium or heavy.
Average Length	Rail length in feet.
% Bad Ties	Self-explanatory.
Max, Distance Between Good Ties	Length in inches between two successive good ties.
M & L Bolts	Number of missing and loose joint bolts in sample.

[1/] See "Consultant's Report" dated June, 1979, prepared by Railway Technology Services, Inc. for RCAI.

Track Structure (Cont'd)

Broken Joints	Number of broken joint bars in sample.
Ineffective Tie Plates	Number of missing or ineffective tie plates in sample.
Ineffective Rail Spikes	Number of missing or loose rail spikes in sample.
Gauge Variance	Measured from a standard gauge of 56 1/2 inches, with a minus (-) indicating tight gauge and a plus(+) wide gauge.
Cross Level	Deviation in inches from horizontal. Indicates surface alignment.
Ballast	Type of material and whether work is needed.
ROW Improvement	Whether slope or drainage improvements are required.
Vegetation	Degree of brush cutting or weed control required. Graded as none, light, medium and heavy.

Turnouts

Switch length	Length of moveable parts, in feet.
Switch Condition	Condition of points and connections. Graded as poor, fair or good.
Frog Number	Defines turnout geometry.
Frog Type	Types include: RBM - rail bound manganese; S.G. - self-guarded (manganese); S.R. - spring-rail; B.R. - bolted rigid.
Frog Condition	Condition of frog point and flangeway area. Graded as poor, fair or good.
Guard Rail Type	Types include bolted rail and cast steel.
Guard Rail Cond.	Condition graded as poor, fair or good.
Alignment Surface	Horizontal and vertical alignment of the running surface of rails. Graded as poor, fair or good.

Highway Grade Crossings

Length (of crossing)	Length measured in feet along center line of track.
Material (shoulder) (gauge)	Type of material used outside (shoulder and between (gauge) rails. Classified as timber, asphalt paving, bituminous paving, and gravel.
Material Condition	General condition of shoulder, gauge, and between track materials graded as poor, fair or good.
Drainage Improvements	Whether any evidence of ponding was observed, thus indicating the need for drainage work.
Protection	Type of roadway warning device classified as none, signs, or flashing light signals.

The unit prices shown as part of the rehabilitation cost estimates are comprised of labor with payroll taxes and insurance, equipment ownership and operating costs, material costs and a percentage for supervision and general administrative overhead. The Brotherhood of Maintenance of Way Employees Union Wage Rates were used for rehabilitation estimates on all lines.

The general administrative and overhead additive for the railroad union is 78 percent applied to labor only. Equipment costs include depreciation, taxes, insurance, major repair allocation, running repair costs, fuel, oil, grease and expendable supplies. Material costs are current (1979) for the Northwestern area of the United States. The quantities of work to be performed on each line segment were determined by analyzing the field inspection sheets for each line inspected. In carrying out track rehabilitation, FRA-recommended rehabilitation specifications (or equivalent state specifications) were used as a basis for quantity estimates. These specifications mandate greater upgrading than that required by the track safety standards. This "overshooting" is deliberate and necessary in that the object is to keep the line in operation for a period of time without the danger of premature shutdown on account of failure to meet safety standards at a particular but unknown location on the line. Some additional ties were included in track with lighter than ninety pound rail, since FRA Standard of one hundred inches between sound ties is simply too great in light rail situations.

Rehabilitation costs are simply the product of the amount of work to be done times the unit price. The work categories used

in estimating rehabilitation costs are as follows:

Cross-Tie Replacement	Includes ties and respiking and replacing tie plates, where required.
Joint Tightening	Tighten bolts in joint bars
Replace Joint Bars	Includes joint bars and bolts
Replace Tie Plates	Includes respiking and replacing tie plates
Turnout Rehabilitation	Includes replacing or repairing frogs, switch points, and switch ties, as required
Ballast Dump	Adding additional ballast both inside and outside of the crib
Spot Tamping	Includes surfacing and aligning, where required
Surfacing and Lining	Full-scale tamping, surfacing, and aligning
Spraying	Weed and brush control
Embankment Work	Stabilizing fill sections by building up embankments where required

Salvage values were established based on current market condition for track material stockpiled ready for resale. These unit prices are summaried in the following table. OTM (other track material) includes tie plates, spikes, joint bars and bolts, nuts and washers. Weight of OTM averages 25 percent of the rail weight.

TRACK MATERIAL SALVAGE VALUE

RAIL

Weight	Scrap	Industrial Grade	No. 1 Relay
65 lb	$ 95/ton	$ 95/ton	$ 95/ton
70 lb	95/ton	95/ton	95/ton
75 lb	95/ton	95/ton	95/ton
85 lb	95/ton	95/ton	95/ton
90 lb	95/ton	200/ton	250/ton
100 lb	95/ton	200/ton	250/ton
112 lb	95/ton	200/ton	275/ton

TURNOUTS

65 lb	$366/ton	$366	$366
70 lb	428	428	428
75 lb	457	457	457
85 lb	486	486	486
90 lb	546	2000	2900
100 lb	612	2100	3100
112 lb	679	3000	5000

OTHER TRACK MATERIALS

65-85 lb	$ 95/ton
90-112 lb	$ 275/ton

TIES	Average $2.00 each

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

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[illegible]

The salvage values for each line were established by extending the quantity of each type of material by the appropriate unit price for the condition of the material. Condition of material was determined from the branchline inspections. The average cost to remove track and stockpile material using conventional methods is $2.31 per foot or $12,200.00 per mile.

4. Future Freight Service Needs

The regulations call for an economic and operational analysis of present and future freight service needs. The information given in Sections 1 and 2 provides a complete statement of present needs. Future needs were developed from (a) comments made by shippers to interview personnel during the conduct of the shippers' survey, (b) a careful review of comparative truck and rail rates or tariffs, (c) an assessment of modal shares and recent shifts, and (d) consideration of whether intramodal truck competition by itself was sufficient to insure reasonable rates for those presently utilizing rail services. Whether elimination of intermodal competition through rail service termination is truly in Montana's long-term interest is a question which must be carefully considered by government and shippers/receivers alike. In the face of changing modal economics and energy dependency, there is no guarantee that local interests will be best served over the long term by total dependence upon motor carrier transport.

5. Effects of Abandonment on State Transportation Needs

The regulations call for an analysis of the effects of abandonment with respect to the transportation needs of the State. This has been done by equating originations/terminations on the branchline with those in the remainder of the State. In most cases, the resulting percentage is well under one percent. For these lines, MTD concludes the impact of abandonment on the transportation needs of the State will be small.

Initial economic, environmental, energy, and transportation impacts are summarized on Worksheet II (unpublished information supplied separately to the MDH). Usually, the economic impacts far outweigh the other impacts in magnitude and effect.

6. Impacts of Substituting Alternate Rail or Other Mode

The regulations require determining the relative economic, social, environmental and energy costs and benefits involved in the use of alternate rail services or alternate modes, including costs resulting from lost jobs, energy shortages, and the degradation of the environment.

Further investigation of alternate rail possibilities focuses on:

The feasibility of rail service over portions of the line. The objective is to save carloads wherever possible while eliminating unproductive trackage.

The impact of alternate rail service on railroad operations, including the need to change the base of operations or to secure trackage rights over another railroad.

The possibility of having another railroad provide service, perhaps as part of a larger market swap.

Whether shortline railroad operation might be warranted.

Similarly, the possibilities of using substitute services (alternate modes) are also examined, including:

How businesses would tend to ship or receive commodities were rail service terminated (based on shipper survey responses indicating whether they would ship all-the-way by truck or use a nearby team track).

Again using the shipper survey data, to identify situations involving large tonnages of similar commodities potentially requiring special transfer facilities (which presently are not available, but if provided, would significantly reduce transshipment costs). If such situations could be identified, order-of-magnitude cost estimates would then be prepared. These capital estimates would be compared against the potential transport cost savings to see whether investment was warranted in alternate mode capital facilities.

Nearby team track facilities were assessed for their proximity, convenience (easy access via a truck route), condition, and presence of transshipment facilities, such as a loading dock.

Since each branchline is unique, the assessments are likewise variable in format and content.

7. Methods of Achieving Economies in Line Operations

Basic information presented includes the base of operations and the number of times the line is operated on a scheduled basis in a given year. Component assessments include:

An initial assessment as to the practicality of reducing the frequency of operations as a means of reducing costs.

The possibilities for consolidation, pooling, or joint use on the branchline.

8. Effects on or by Profitable Carriers

Identification of any affect on another rail carrier from the abandonment or continued operation of the line.

9. Potential for Rail Banking

Whether the line should be retained intact for long-term fossil fuel or agricultural production purposes, even though service may be discontinued for an indefinite period.

10. Future of Line in Relation to the Federal Assistance Program

The regulations call for a statement of the State's projected future for the line vis-a-vis Federal assistance under the Section 803 program (RRRRA). Each assessment, therefore, contains a statement indicating:

Anticipated profitability of the line.

Effect of rehabilitation on profitability.

Present status of the line -
 Whether the carrier has made a decision to seek the abandonment of the line or not.

 If so, whether an abandonment application has been filed and its current status (including whether an initial decision has been issued by the ICC).

Present eligibility of the line for financial assistance, MDH's and the type of assistance that may be sought, if known. (Under recent revisions to the Section 803 program, federal assistance is available for enhancing the viability of light density lines or mitigating the effects of abandonment. Financial assistance can be used in subsidizing operations or for projects involving acquisition, rehabilitation, new construction, or substitute service).

11. Description of Alternatives Evaluated: Results

Identification of the specific (a) ownership and/or configuration options, (b) investment alternatives (i.e., degree of rehabilitation or other types of capital investment), and (c) traffic scenarios evaluated. The results of this evaluation are presented on Worksheet VI in terms of each alternative's present value of costs. Each row represents a different alternative. Row entries include the following:

Alternative	The specific ownership, investment and traffic options or scenarios comprising that alternative.
First Quarter	Subsidy cost (or profit) of continuing rail operations over the line during the first three-month period before any rehabilitation can be accomplished. (Figures in parentheses indicate a profit.)
Final Quarter	Subsidy cost (or profit) of continuing rail operations for a quarter ending four years later. Includes cost reductions brought about by rehabilitation. (Figures in parentheses indicate a profit.) Final quarter cost computed both with and without rehabilitation costs.
Total	Subsidy cost (or profit) of rail operations over a full four-year period. Four-year cost computed both with and without rehabilitation costs. (Figures in parentheses indicate a profit.)
Ratio	The ratio of the cost of discontinuing rail service divided by the cost of continuing rail service. Analogous to a benefit-cost ratio. A value substantially greater than 1.00 indicates that a social need does exist and economic benefits can be achieved by retaining rail service. Not applicable if the line is profitable to the owning carrier.

The figures shown on Worksheet VI are derived from similar data contained on Worksheets III and V (unpublished data supplied separately to the MDH). Each present value cost (for initial quarter, final quarter, four-year total, and equivalent uniform quarterly cost) represents the cost of continuing service plus the cost of discontinuing service on any remaining portion of the line not operated.

Worksheet VII presents a distributed analysis of the gains and losses experienced by various groups over a four-year period, were rail service discontinued. The figures are based on component calculations made in determining the cost of discontinuing rail service (Worksheet III).

12. Overall Branchline Assessment

The conclusion reached by the MDH regarding the retention of rail service on the line. Represents the key portion of each branchline assessment. Since each line is unique, the assessments are variable in format and content.

13. Relationship of Decision to Evaluation Criteria

A brief discussion explaining how the conclusions reached in Section 12 relate to the basic criteria stated in the revised Montana Planning Work Statement, dated June, 1979. These criteria are given below:

Does the line have potential economic viability?

The magnitude of the economic impacts of abandonment.

Community impact resulting from abandonment.

Effect of abandonment on energy use and other environmental factors.

Whether the light density line is essential to the state or regional rail network.

The availability of alternate modes or substitute shipping arrangements.

V. PRIORITIZATION OF LIGHT DENSITY LINES

Federal regulations require states to:[1]

> "Group projects for which the State may seek assistance (continuation payments, acquisition, rehabilitation, rail banking, rail service substitution) in order of compliance with the State's criteria and goals for assistance as determined under paragraph (c) (4) of this section. This shall be set forth as a summary table which clearly identifies the location of the project and describes the type (subsidy, rehabilitation to Class "X", etc.), estimated amount, and expected timing and duration of assistance to be sought."

These regulations essentially mandate a "program of projects" which is premature until a state rail plan has been prepared and adopted.[2]

Prioritization of lines and the selection of projects start with the individual light density line assessments given in Technical Appendix A. Table 8 presents the estimated costs of continuing and discontinuing rail service over each line. This table also presents the ratios of the cost of discontinuing rail service divided by the cost of continuing such service for each line where such computations are possible. These ratios are analogous to a benefit-cost ratio.

Table 9 presents the prioritized results, with highest priority being assigned to Lines 1, 2 and 3 (Group A). All three are Milwaukee lines, although this could change were the Burlington Northern to

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[1] 49 CFR Part 266.15(c)(5).

[2] The timing and funding aspects are especially difficult to predict. For example, a state has no say as to when a railroad will seek to abandon a line or when the ICC will conclude that public convenience and necessity permit abandonment. The amount of Section 803 funds to be made available to Montana is likewise unknown. Programming the use of these funds is especially challenging in the face of the uncertainties involved in allocating appropriated funds among the states. Hence, a "realistic" program of projects cannot be developed at this time.

TABLE 8

COSTS OF CONTINUING AND DISCONTINUING RAIL SERVICE

Line/Alternative	Present Value of Costs Over a 4-Yr Period ($000)1/		Ratio: Cost of Disc. Service ÷ Cost of Cont. Service 4/
	Discontinue Rail Service 2/	Continue Rail Service 3/	
1. Great Falls to Agawam			
A. MILW Oper, Great Falls - Fairfield	949	(629)	n.a.
B. MILW Oper, Great Falls - Agawam	1,002	(522)	n.a.
C. BN Oper, Eastham Jct - Fairfield	945	(1,428)	n.a.
2/3. Great Falls to Lewistown to Harlowton			
A. MILW Oper, Harlowton - Great Falls	2,801	(7,835)5/	n.a.
B. MILW Oper, Harlowton - Lewistown MILW Oper, Lewistown - Highwood BN Oper in Great Falls	2,726	(1,546)	n.a.
C. MILW Oper, Harlowton - Lewistown MILW Oper, Lewistown - Geraldine BN Oper, Great Falls - Highwood	2,738	(3,797)	n.a.

1/ Figures shown are rounded to nearest thousand dollars. To convert to an annual cost, divide number shown by 3.46. Data source: Worksheet VI - Evaluation of Alternative Implementation Options (see Individual Branchline Assessments, Technical Appendix A).

2/ The same track segments were utilized in computing the cost of continuing and discontinuing rail service. In situations where the alternative shown proposes continued rail service over only a portion of the line (Lines 1 and 2/3), an additional cost equal to the difference between abandonment of the full line and the amount shown is also incurred.

3/ Unless otherwise noted, costs shown include amortizing rehabilitation to FRA Track 2 standards. Parenthesis indicates revenues exceed costs; hence the alternative is profitable.

4/ Analogous to a benefit-cost ratio. The notation n.a. (i.e., not applicable) indicates either the line earns a profit (thus, government expenditures may not be required) or different traffic figures have been used which differ from that used originally to calculate the cost of discontinuing service.

5/ High profitability stems from inclusion of Great Falls traffic. (Such traffic not included in other Line 2/3 alternatives.)

TABLE 8

COSTS OF CONTINUING AND DISCONTINUING RAIL SERVICE (Continued)

2/3. Great Falls to Lewistown to Harlowton - (continued)			
D. MILW Oper, Harlowton - Lewistown			
MILW Oper, Lewistown - Denton	2,801	(3,835)	n.a.
BN Oper, Great Falls - Sq Butte			
E. MILW Oper, Harlowton - Lewistown BN Oper, Great Falls - Denton	2,683	(3,918)	n.a.
F. BN Oper, Great Falls - Highwood via			
(1) Moccasin - Lewistown		(641)	n.a.
(2) New Connection - Lewistown	2,302	(1,975)	n.a.
(3) Judith Gap - Lewistown		(1,849)	n.a.
G. BN Oper, Great Falls - Highwood			
BN Oper, Great Falls - Geraldine via			
(1) Mocassin - Lewistown		(2,446)	n.a.
(2) New Connection - Lewistown	2,315	(3,779)	n.a.
(3) Judith Gap - Lewistown		(3,653)	n.a.
H. BN Oper, Great Falls - Sq Butte			
BN Oper, Great Falls - Denton via			
(1) Moccasin - Lewistown		(2,601)	n.a.
(2) New Connection - Lewistown	2,378	(3,934)	n.a.
(3) Judith Gap - Lewistown		(3,808)	n.a.
I. BN Oper, Great Falls - Denton			
BN Oper, Great Falls - Lewistown via			
(1) Moccasin - Lewistown		(2,441)	n.a.
(2) New Connection - Lewistown	2,260	(3,775)	n.a.
(3) Judith Gap - Lewistown		(3,649)	n.a.
4. Lewistown to Winifred	152	503[1/]	0.3
5. Lewistown to Heath			
A. MILW Oper	12	15[1/]	0.8
B. BN Oper		12[1/]	1.0
6. Moccasin to Lewistown			
A. BN Oper	34	850	0.1
B. BN Oper (with MILW traffic)		(272)	n.a.
7. Hogeland to Saco	339	1,005[2/]	0.3

1/ Rehabilitation to Track Class 1 standards.

2/ Rehabilitation costs not included.

TABLE 8

COSTS OF CONTINUING AND DISCONTINUING RAIL SERVICE
(Continued)

8.	Red Lodge to Silesia			
	A. BN Oper (present traffic)	4	674[1]	0
	B. BN Oper (+ 600 carloads coal)		1,100	n.a.
	C. BN Oper (+ 3000 carloads coal)		80	n.a.
	D. BN Oper (+ 15000 carloads coal)		(9,090)[2]	n.a.
9.	Ringling to White Sulphur Springs			
	A. WSS & YP Oper (present traffic)	325	99[1]	3.3
	B. WSS & YP Oper (extended system)		504[1]	0.6
10.	Glasgow to Glasgow AFB			
	A. BN Oper (present traffic)		492[3]	0
	B. BN Oper (+ 100 carloads)	0	331[3]	n.a.
	C. BN Oper (+ 250 carloads)		90[3]	n.a.
	D. BN Oper (+ 500 carloads)		(384)[3]	n.a.

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[1] Rehabilitation to Track Class 1 standards.

[2] Track upgraded to Track Class 3 standards.

[3] Rehabilitation costs not included.

TABLE 9

PRIORITIZATION OF LINES

Group A - Profitable Lines

Lines (or segments of lines) for which the calculations indicate attributable revenues are greater than avoidable costs. In such situations, no economic basis exists for line abandonment even though the owning railroads may have identified such lines on their ICC system diagrams. The net profit may or may not be great enough to cover rehabilitation needs; in the latter case, federal and/or state funds may be required to meet rehabilitation needs.

Line 2 - Great Falls to Lewistown
Line 3 - Lewistown to Harlowton (Judith Gap - Lewistown segment)
Line 1 - Great Falls to Agawam (Great Falls - Fairfield or Eastham Jct. - Fairfield segments)

Group B - Marginally Profitable Lines

Lines (or segments of lines) for which the calculations indicate could earn a small profit with rehabilitation, although the return is not sufficient to cover anticipated rehabilitation needs. Provided that the MDH cost estimates are reasonably close to the actual costs now being captured in railroad branchline accounting systems, no economic basis exists for line abandonment. The main need is for capital funding to improve the track structure sufficiently to permit safe, efficient long-term operation.

Line 4 - Lewistown to Heath

Group C - Lines Having Strong Socio-Economic Justification

Lines (or segments of lines) which are unprofitable under any reasonable assumptions concerning traffic growth and rehabilitation. However, the costs of discontinuing rail service on these lines (over a four-year period) are greater than the costs of continuing service, thus providing a socio-economic basis for government/shipper subsidization. Retention of these lines depends upon strong local interest and shipper commitments to increase usage and financially support continued rail service.

Line 9 - Ringling to White Sulphur Springs (present system)

TABLE 9

PRIORITIZATION OF LINES
(Continued)

Group D - Lines Not Having Strong Socio-Economic Justification

Lines (or segments of lines) which are unprofitable under any reasonable assumptions concerning traffic growth and rehabilitation, and which the costs of discontinuing rail service (over a four-year period) are less than the costs of continuing service. Retention of these lines using government financial resources is not advisable.

Line 4 - Lewistown to Winifred

Line 6 - Moccasin to Lewistown (unless retained in lieu of Line 3

Line 7 - Hogeland to Saco

Group E - Lines Needed for Economic Development Purposes

Lines (or segments of lines) which presently are unprofitable, but may have sufficient traffic potential from on-going or expected economic development to become profitable within a short period.

Line 8 - Red Lodge to Silesia

Line 10 - Glasgow to Glasgow AFB

acquire all or portions of these lines.[1/] No economic basis exists for abandonment, although institutionally this is a very real possibility given the Milwaukee bankruptcy.

Presently, Montana's allotment of Section 803 funds is minimal, due to the relatively limited amount of abandonment taking place in the state since the passage of the 4R Act in February, 1976. Consequently, the amount of rehabilitation that can be undertaken at the present time is very limited. A further complication is the state requirement that shippers or local governments provide the local share. Thus, no projects are presently contemplated for lines listed in Groups B through E. This might ultimately change for Lines 4, 8, and 10, but for now the lack of funds and any immediate pressing need obviates the possibility of rehabilitation projects on these lines in the near future.[2/]

[1/] While it may appear that the Montana Rail Plan is geared primarily towards rendering Section 803 financial assistance to selected Milwaukee lines, this action is primarily a consequence of the results of the detailed assessments rather than from a desire to retain the Milwaukee in Montana as a competitor to the Burlington Northern.

[2/] The ICC is expected to rule shortly on whether public convenience and necessity permit the abandonment of Line 8 between Red Lodge and Silesia. If it rules in favor of the BN, there is a strong possibility that the decision will be appealed by the Beartooth Coal Company, with abandonment being postponed until the appeal can be settled. If the line is retained, MDH anticipates that either the BN or the Beartooth Coal Company may seek Section 803 funding for the rehabilitation of this line. MDH will consider such a request in terms of the funds available and statewide needs at that point in time. A major factor in such a decision will be the contractural commitments for coal then in effect and an assessment of the growth in production and sales likely over the next few years. In any event, economic development type projects (Group B) have a lower priority than Group A projects.

Although this plan has been developed during a period when several alternatives or extensions to the Trustee's expected reorganization plan are being promoted by their sponsors, events over the next few months will probably resolve much of the uncertainty which now exists. Either one of these alternatives is going to gain substantial government, shipper, and labor support, or they are just going to be quietly forgotten as the Trustee presses forward with reorganization of the Milwaukee.1/

There is no question that the preparation of this state rail plan would have been far easier had the Milwaukee's future been settled, one way or another. While the merits of the individual Milwaukee lines can be readily assessed on the basis of whether the Milwaukee stays or goes, the selection of projects cannot. Allocation of Montana's Section 803 allotment vis-a-vis Milwaukee lines is a function of (1) who is the ultimate owner and/or operator, including financial capability, (2) how much of the present system is to be retained, (3) anticipated short-term needs for rehabilitation funding -- especially for "emergency" type projects or "spot" improvements to prevent or minimize service interruptions pending determination of appropriate long-term solutions, and (4) the results obtained from the proposed grain subterminal feasibility study. Given the present situation, one list of projects and their assigned priorities is impossible. Consequently, five different possibilities are shown

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1/ Montana can possibly influence this decisionmaking, but in the end the ultimate responsibility rests with the U. S. District Court overseeing the reorganization of the Milwaukee and the Interstate Commerce Commission.

in Table 10.[1] These are not alternatives in the true sense, as the selection of the particular course of action may be largely beyond state control.

Should the amount of Section 803 funds available to Montana increase substantially in future years, then it will become possible to undertake other projects in addition to the light density line rehabilitation outlined in Table 10. In particular, it would then become feasible to utilize Section 803 funds to improve highway segments receiving increased truck movements caused by rail line abandonments. Typical projects would include pavement overlays and bridge replacement (to eliminate load restrictions).[2]

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[1] In addition to the Trustee's expected reorganization plan, the projects resulting from each of the alternatives or extensions to the Trustee's plan are also shown.

[2] A good example of a potential project would be the resurfacing of Secondary Route 236 between Hilger and Winifred in Fergus County. See the individual line assessment for line 4.

TABLE 10

ANTICIPATED SECTION 803 PROJECTS UNDER THE VARIOUS REORGANIZATION PLANS OR EXTENSIONS THEREOF

A. Trustee Reorganization Plan - Connecting Carriers Acquire Profitable Segments

FY 1979 Projects. Funding of "emergency" type projects on the Milwaukee's 10th, 11th, 13th, and 14th Subdivisions to prevent any disruption in service between Harlowton (initially) or Judith Gap (if and when Milwaukee service ceases) and Fairfield. Objective is to provide minimal rehabilitation as required to obviate the likelihood of further embargoes stemming from poor track conditions until such time as the results from the grain subterminal study are known and an appropriate long-term decision can be reached. Shippers and/or local governments would be required to provide the local share. Rehabilitation would be to FRA Track Class 1 standards.

FY 1980 and Beyond.[1/] Projects depend upon resulting acquisition by connecting carriers of portions of the Milwaukee's 10th, 11th, 13th, and 14th Subdivisions.[2/] If purchased outright, no use of Section 803 funds is presently contemplated (profits should be sufficient to amortize rehabilitation costs). If leased from the Milwaukee, Section 803 funds will be made available if it will lead to a railroad agreement to purchase the line once rehabilitated, with the connecting carrier providing the local share. Otherwise, Section 803 funds would be utilized only if a long-term service agreement can be negotiated between the Milwaukee (as leasee), the connecting carrier (as the operator) and the shippers, with the shippers providing the local share. Rehabilitation would be to FRA Track Class 2 standards for those sections having a high probability of long-term retention.

1/ Projects on the Milwaukee's 10th and 13th Subdivisions also depend upon the results obtained from the grain subterminal feasibility study. If a finding is reached that the concept is economically and institutionally feasible, then there will be little need for rehabilitation projects on lines (or sections) which will be phased out once the subterminal is in operation.

2/ Inclusion of Line 4, Lewistown to Heath , is only for emergency-type repairs sufficient to keep the line in operation until longer term decisions can be made. Under the New Milwaukee Organization concept, the retention of this line becomes more important for revenue generation purposes. There is little doubt that with improved service and equipment availability that the revenue potential of this line could be substantially improved. Much depends upon the attitude and participation of the major shipper on this line.

TABLE 10
(Continued)

B. <u>New Milwaukee Organization</u> - <u>Retention of Existing Milwaukee Lines in Montana</u>

<u>FY 1979 Projects</u>.[1/] Funding of "spot" improvement projects on the Milwaukee's 10th, 11th, 13th, and 14th Subdivisions to correct drainage or slide problems and rehabilitate track in the sections where most needed between Harlowton and Fairfield. Objective is to begin the complete rehabilitation of the line to FRA Track Class 2 standards, with the entire project expected to take several years on account of the funds required. Shippers and/or local governments would be required to provide the local share.

<u>FY 1980 and Beyond</u>. Continuation and completion of the rehabilitation of the Milwaukee's 10th, 11th, 13th and 14th Subdivisions between Harlowton and Fairfield to FRA Track Class 2 conditions.

C. <u>South Dakota's Proposed Extension of the Milwaukee Mainline to Miles City</u>

<u>FY 1979 Projects</u>. Participation with North and South Dakota and Minnesota in the $2.3 million immediate rehabilitation of the Milwaukee mainline between Jonathan, MN and Miles City. Remaining funds would be used for "emergency" type projects on the Milwaukee's 10th, 11th, 13th and 14th Subdivisions, as described under paragraph A above.

<u>FY 1980 and Beyond</u>. Identical to paragraph A above.

D. <u>Milwaukee Mainline Extended Further West to a Connection with the Union Pacific Near Butte</u>.

<u>FY 1979 Projects</u>.[2/] Participation with North and South Dakota and Minnesota in the $2.3 million immediate rehabilitation of

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[1/] MDH anticipates that mainline traffic volumes will be in excess of the five million gross tons per mile per year limit for participation in the Section 803 program. Thus, the use of such funds would be restricted to the Milwaukee's grain lines in central Montana.

[2/] MDH anticipates that traffic volumes on the Milwaukee mainline section between Miles City and Butte will be below the five million gross tons per mile per year limit, since the main function of the line would change from transcontinental to local service. Thus, Section 803 funds could be utilized in rehabilitating this line. Since such funds are limited, Section 505 low interest loans will be sought to complete the rehabilitation within two or three years to FRA Track Class 3 standards.

TABLE 10
(Continued)

the Milwaukee mainline, as described previously. Remaining funds would be applied to "spot" projects to rehabilitate track in the sections where most needed between Miles City and Butte. Any remaining funds would be used for "emergency" type projects on the Milwaukee's 10th, 11th, 13th, and 14th Subdivisions, as described under paragraph A above.

FY 1980 and Beyond. Continuation and completion of the rehabilitation of the present Milwaukee mainline between Miles City and Butte, using Section 505 loans and funds from other sources. Continuation and completion of the rehabilitation of the Milwaukee's 10th, 11th, 13th and 14th Subdivisions between Harlowton and Fairfield to FRA Track Class 2 standards.

E. Substitute Service - Grain Subterminal in the Lewistown Area

FY 1979 Projects. Funding of "emergency" type projects on the Milwaukee's 10th, 11th, 13th, and 14th Subdivisions as described previously in paragraph A.

FY 1980 and Beyond.1/ Planning, design, construction, and start-up funding of a grain subterminal ultimately replacing local rail service on the Milwaukee's 10th and 13th Subdivisions and portions of the Burlington Northern's Montana Division - 5th Subdivision line. Other federal and state funding will be sought in addition to the use of Section 803 funds.

1/ Assumes that the grain subterminal concept is found to be economically and institutionally feasible and that the Milwaukee ceases to exist west of Miles City.

VI. PUBLIC PARTICIPATION

This section of the State Rail Plan describes the participation in the planning process by local and regional government bodies, the railroads, railroad labor, rail service users and the general public. It also outlines the additional procedures that will be followed in continuing that participation through the selection and adoption of the plan and particular projects.

Federal regulations require states to:[1/]

> "Describe the participation in the planning process by local and regional governmental bodies, the railroads, railroad labor, rail service users, and the public generally. In the project selection state, public participation should be specifically sought regarding each project described and analyzed in accordance with Paragraphs (c)(4) of this section and regarding the determination of which of these projects will be implemented and the grouping of such projects under Paragraph (c)(5) of this section. As one element of this participation, the State shall afford an opportunity for a public hearing. Public notice shall be given (in accordance with applicable State law and practice concerning comparable matters) that a draft of the Plan is available for public inspection at a reasonable time in advance of the hearing."

A. Governmental and Public Participation

The Montana Rail Plan has been developed in coordination with other state agencies as well as private and public groups with an interest in rail transportation. The Montana Department of Agriculture, the Department of Community Affairs, the Public Service Commission, and the Governor's Office all participated (albeit in varying degrees) in developing state rail policy and in preparing this document. The principal mechanisms utilized were formal and informal meetings and telephone conversations. The relatively

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[1/] 49 CFR Part 266.15(c)(6).

limited amount of time available to the MDH (ten weeks) simply did not permit the use of more formalized methods for coordination and participation. Meetings have also been held with officials of the Burlington Northern, the Milwaukee, and the Union Pacific, both prior to and during the preparation of this Plan.

B. Local Participation

Two mechanisms have been used to involve local governments and shippers in the rail study. Shippers on the ten light density lines which the owning railroads have classified as being in ICC System Diagram Category 1, 2 or 3, have participated in the rail users' survey conducted for the MDH. Shippers were informed of the rail study and then asked questions regarding the importance of rail service to their operation and the availability of alternative modes, were rail service discontinued.

Perhaps the most effective mechanism has been a bi-weekly newsletter published and broadly distributed among state and local governmental agencies, shippers along studied lines, other interest groups, and individuals desiring information on the rail program. The purpose or objective of the newsletter is to (a) present study findings, (b) describe the analytical procedures being used, (c) keep the public abreast on the Milwaukee situation, and (d) provide other information needed to supplement or support the rail planning process.

C. Review and Comment on the Draft Plan

No final decision has yet been made by the Union Pacific or the Burlington Northern as to which Milwaukee lines in Montana, if any, will be purchased by either railroad. Consequently, it has

not been possible to determine specifically which Milwaukee lines will be abandoned and which will be transferred to other railroads. Additional analysis of other Milwaukee lines in Montana is anticipated over the next several months. Rather than to delay distribution of this Plan pending completion of these assessments, the findings of such analyses will be disseminated through supplements to the Montana Rail Plan.

D. Public Hearing

After distribution of the plan document and allowing sufficient time for its review by those interested in rail planning, a single public meeting will be held in Helena to receive statements or comments. Names of all individuals, agencies, organizations, and local governments having an interest in rail planning will be notified of the time and place of the public hearing. Notices will also be published in newspapers. Statements or comments made at the hearing will be used in revising or updating the Montana Rail Plan, as appropriate.

VII. DESCRIPTION OF THE OVERALL PLANNING PROCESS FOR ALL TRANSPORTATION SERVICES IN THE STATE

Federal regulations require the state rail plan include "a description of the overall planning process for all transportation services in the state."[1]

Montana fully recognizes the importance of its rail system and its dependence upon it. Present rail issues reflect (1) the potential loss of virtually all intramodal rail competition, with resulting inflexibility in service and rate structures, (2) the physical obsolescence of appreciable portions of the rail system accentuated by a deferral of necessary maintenance and upgrading expenditures, (3) car supply and transit time reliability problems, and (4) traffic erosion stemming from past or projected infrastructure investments in other modes.[2] Resolution of issues such as these mandates a careful accounting of the gains and losses accruing to the affected modes, and a decision as to where capital investments (or regulatory actions) produce the greatest public benefit. Such intramodal decision making is gradually coming about even though Montana has not yet integrated the two Departments primarily responsible for the transportation planning for the different modes into a unified organization.[3]

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[1] 49 CFR Part 266.15(c)(7).

[2] Not necessarily located in Montana (e.g., the Port of Lewiston, Idaho).

[3] The Department of Highways and the Department of Community Affairs.

The Montana Department of Highways is responsible for highway and rail planning. Highway systems planning involves determining regional transportation needs and includes the consideration of other modes as well as alternative routes or corridors. Highway planning subdivides into five different categories: (1) urban areas over 50,000 population, which are required to have a 3-C transportation planning process (i.e., Billings and Great Falls), (2) urbanized areas (under 50,000 population) which have developed a formalized process similar to that existing in the two urban areas in Montana, (3) other urbanized areas having a less formalized process, (4) rural primary highways, and (5) secondary highways in each of Montana's 56 counties. The first three categories represent a joint effort between local governments and the MDH. MDH is primarily responsible for the latter two categories (except county secondary highways). Rail planning stems from Executive Order 14-78 in which Governor Judge directed the MDH to administer and coordinate a state rail plan.

The Department of Community Affairs is responsible for transit and aviation planning. Most of the transit planning and project implementation done to date has focused on meeting the needs of the elderly and handicapped dependent upon public transportation for meeting their basic medical, business and social needs. Aviation planning, primarily project oriented, is directed toward improving the capabilities of the state's air carrier and general aviation airports. DCA also prepared the state portion of the National Airport Plan.

The creation of a Montana Department of Transportation is considered by many as inevitable. Until a Department is established through legislation, modal transportation planning will continue largely as it has been conducted in the past (except for rail planning, which is new to the state). An integrated statewide transportation planning process will gradually come about once the separate modal planning functions are consolidated into a single agency.